

**The Quality and Quantity of Teacher  
Verbal Feedback and its Relationship to  
Pupil Behaviour before and after  
Training**

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- 3) Inter-Observer calculations Kappa
- 4) Guidelines for recording teacher feedback and examples of  
Tabulation of analysed audio-tapes
- 5) Over head projections used in the presentation of 'Four Essential  
Steps'

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Jeremy Swinson

## **Abstract.**

The study was in two parts. In the first study the verbal behaviour of 50 teachers was recorded on audio-tape while a simultaneous record was made of pupil behaviour. The tapes were analysed in detail. Observers recorded rates of teachers' feedback, both positive and negative and whether the feedback was directed to pupils work or behaviour. The proportion of this feedback that contained a description of activity, whether the pupil was named as part of the feedback, whether the feedback was directed towards individuals or groups and finally in the case of negative feedback whether it included a redirection was recorded.

The majority of feedback was of a positive nature directed towards pupils' work (57%), next most frequent was negative feedback directed towards pupils' behaviour (28%). Some negative feedback concerned pupils' work (11%) and very little positive feedback was directed to pupils' behaviour (4%). Most feedback was directed at individuals not groups. Pupils' names were used most frequently as part of negative feedback. Redirections as part of negative feedback were only given in between a quarter and a third of feedback. There was a great similarity in the proportions of various types of feedback given by infant junior and secondary teachers. However infant and junior teachers were more likely to use a pupil's name, and infant teacher tended to give slightly more redirections. The relationship between teacher feedback and pupil behaviour was examined. Positive feedback was found to be associated with high rates of pupils' on-task behaviour, while negative feedback was associated with lower rates of pupil on-task behaviour.

In the second study 19 teachers from all three phases of education took part in a training exercise, "Four Essential Steps to Classroom Management". This training was aimed at increasing both the rate, proportion and quality of positive feedback given by teachers to their pupils. The teachers and pupils were observed both before and after the training. The training was successful in that rates of positive feedback, both directed towards pupils' work and to behaviour increased. The effect that these changes in both the quantity and quality of feedback had on pupil behaviour was recorded. Increased rates of positive feedback were associated with lower rates of negative feedback and a marked increase in pupils' on-task behaviour from an average of 77.5% before training to a rate of 94.0% after training was noted.

The reasons for these changes are discussed and the implications for teachers, schools, teacher trainers and educational psychologists are explored.

# Chapter 1

## Introduction

The art of good teaching and the challenge of difficult to manage students are almost as old as recorded history. Plato (428 –347 BC) in his Meno dialogue gives an account of the teaching methods of Socrates (470-399 BC). These centre on the use of the searching question as a means of getting his pupils to think about issues and problems from a new perspective. Despite his renown as a gifted teacher Socrates was well aware of the degree to which teachers have to employ a range of skills in order to interest let alone inspire their pupils. As he wrote:

*'Children now love luxury. They have bad manners and contempt for authority. They show disrespect for elders and love chatter in place of exercise; children are now tyrants not servants in their households.'*

This description lays to rest the myth, often held by teachers that there was once a golden age when all pupils were dutiful, respectful, hard working and eager to learn. It is salutary to remember that more than two thousand years after Plato and Socrates we are still trying to grapple with the behaviour of pupils in school. It is also worthwhile remembering that it is only a hundred years since we have a record of the last occasion, in

Norfolk in 1896, when a group of pupils went as far as lynching their teacher. While there appears to have been no repetition of such an act since that time, the behaviour of pupils remains an important concern for all teachers. As Gilham (1981), page 34, observed, 'There was a point in the early seventies when it seemed as if many secondary schools in major urban areas were heading for breakdown.' The extent to which this statement was true or a mere reflection of popular press comment is open to question. Such perceptions did, however, lead the Government of the day to set up the Elton Committee which was given the expressed task of looking into such issues, (*Discipline in Schools*, DES, 1989). This report was able to draw a number of conclusions, three of which are central to this thesis (page 70):

'First, that teachers' group management skills are probably the single most important factor in achieving good standards of classroom behaviour. Second, that those skills can be taught and learned. Third, that practical training provision in this area is inadequate.'

It comes as no surprise to learn that considerable time and expertise has been spent in trying to find an answer to the problem of disruptive pupils. It will also come as no surprise to learn that despite all this effort no definitive answer has yet been found. Indeed as time moves on theories proliferate. Porter (2000) examined seven basic theoretical approaches to behaviour in schools ranging from very behaviouristic,

limit-setting strategies to more humanitarian approaches based on choice theory. While a number of these theoretical perspectives may have led to an increase in understanding of classroom behaviour they have not necessarily always led to improvements in teaching methodology and pupil behaviour. As for all complex problems, there is no simple solution.

The central aim of this present research is to shed some light on the problem to provide teachers with strategies that they can, if they wish, incorporate into their practice to improve pupil behaviour.

Research into behaviour and learning in classrooms has examined this issue from a number of perspectives. Considerable research has looked at the characteristics of the troublesome pupils themselves. Others have looked at the problem from a curriculum perspective and examined the construction of the lessons in particular their content and presentation. The characteristics of the teacher style have also been examined in some detail. Researchers have compared for example the outcomes of authoritarian as opposed to democratic styles of delivery, teachers' use of questions and their beliefs and attitudes.

This research has focused on one aspect of teachers' characteristics, that of their use of verbal feedback. This area of enquiry was prompted by the fact that verbal feedback appears to be a central element in the advice included in a number of published programmes

aimed at improving classroom behaviour. Over the past fifteen years a number of teacher training packages have included in their recommendations i.e. Assertive Discipline (Canter and Canter, 1992), The Behavioural Approach to Teaching Package (Wheldall and Merrett, 1985), Preventative Approaches to Disruption (Chisholm et al, 1986), Building a Better Behaved School (Galvin, Mercer and Costa, 1990) and You Know the Fair Rule (Rogers 1990). Despite the amount of time and money spent on the development, production and marketing of these programmes apart from the small number of studies, including a number by the present author little attention been paid to the effectiveness of such packages. Such research seems confined to only two of the programmes, Assertive Discipline and the Behavioural Approaches to Teaching.

Despite this acknowledgement of the importance of teacher feedback implicit in these programmes, with the exception of the work conducted by Frank Merrett and Kevin Wheldall in the late 1970s and early 80s, researchers have given little attention in recent years. Miller (2003) comments on this type of research, page 55,

‘By the early 1990’s the stream of research publications had slowed to a trickle, if not dried up altogether.’

There has also been only very limited information gathered into more detail aspects of teacher’s feedback other than whether it is positive or negative and whether it is directed towards pupils work or behaviour.



More detail aspects of the quality of feedback also seem to have been largely ignored by research.

Therefore there is a need to gather up to date evidence of teachers current use of verbal feedback and to examine in more detail aspects of the quality of this feedback which has been absent from much previous research. This aspect of the research is covered in the first research element of this thesis and includes a detail examination of the relationship between these aspects two aspects of quantity and quality of teacher feedback and the behaviour of pupils in their class. This aspect of this research is found in the first study in this thesis.

The second research study of the thesis is an examination of the extent to which teachers could be trained to change both the nature and quantity of the feedback they used in lessons. This has been an aspect of other training programmes outlined above. However as has been pointed out a number of these programmes have not been the subject of any evaluation. Two programmes have had limited evaluations, Assertive Discipline (Canter and Canter 1992) and BATPACK (Wheldall and Merrett 1985). These evaluations all report changes in teachers' feedback and consequential changes in pupil behaviour. However this training always included advice on a number of other aspects of teacher behaviour, i.e. seating plans and how to deal with disruptive behaviour. It is therefore impossible to relate all the changes that were observed in pupil behaviour solely to teachers' use of feedback. The training given to teachers in this

study was largely confined to their use of verbal feedback. By limiting the advice to teachers' use of verbal feedback an attempt was made to isolate this variable and therefore make it possible to examine the extent to which teachers can be trained to improve both the quality and quantity of verbal feedback they direct to their pupils and the extent to which these changes are reflected in changes in pupil behaviour.

### Statement of Central Issues.

In broad terms the central issue concerned in this thesis is to examine in detail one of the factors which are an essential part of effective teaching. Effective teaching is essentially concerned with how to bring about the desired pupil learning by some educational activity. This usually, but not exclusively, takes place in the classroom. If the classroom is a well ordered environment, i.e. where pupils are following the instructions of their teachers, where the noise is at an acceptable level and where there are few if any disruptive incidents, we can surmise that there is a greater probability for the teaching to be effective.

Up until the 1960s research into teacher effectiveness was dominated by attempts to relate teacher attributes such as personality traits, sex, age or longevity of teaching experience to their pupils progress.

This type of research tended to be of limited value because it was not always apparent how such research could lead to improvements in teaching practice. Since that time however research has tended to focus on activities in the classroom, especially variations in teaching practice focusing particularly on the interaction between teacher and pupil. This type of approach has become increasingly popular largely because teachers can see its application for their classroom practice. This thesis is part of that research tradition.

There are a number of variables, which can be identified as playing a part in the effectiveness of teaching. Kyriacou (1986) has classified these into three groups: -

#### i) Context Variables

Teacher characteristics e.g. sex, age, experience, training  
personality.

Pupil Characteristics e.g. age, ability, social class, race, personality

Class characteristics e.g. size, range of ability, social mix, age

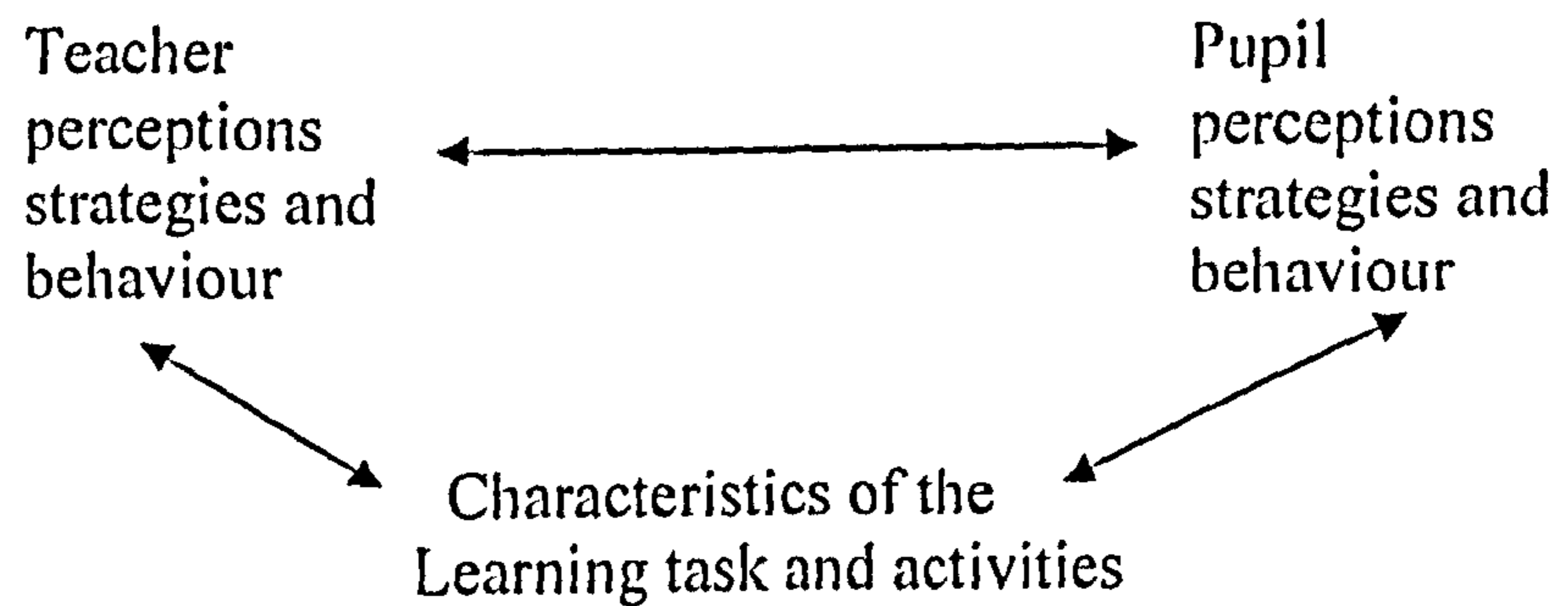
Curriculum characteristics e.g. subject, level of difficulty, task set

School characteristics e.g. size, ethos, disciplinary policy intake

Community characteristics e.g. affluence, population density,  
location

Characteristics of observation e.g. time of day, preceding lesson,  
weather

## ii) Process Variables



These types of variables can include teacher's enthusiasm, their use of questions, use of non-verbal communication, their use of praise and criticism, pupil involvement in lessons, type of feedback received by pupils and the nature of learning activity.

## iii) Product Variables

These variables are those usually involved with the outcome of any teaching. They may be short-term or long-term and can include both cognitive and affective educational outcomes. Not surprisingly, a great deal of research has looked at outcomes in terms of increased knowledge, attainment and exam performance, while others have included studies of motivation, self-confidence and social development or behaviour.

This overall framework of *Context-Process-Product* has provided the basis for almost all research on effective teaching reported over the last few decades (see Bennett, 1976, 1978, Rutter et al, 1979 or Kyriacou 1986). Obviously studies have varied in a number of ways in the emphasis they place on each variable and the ways in which each variable has been examined.

This research is also designed to examine aspects of teacher effectiveness. Although an account will be given on many aspects of the context variables in terms of the age, gender and experience of the teachers observed and the type of school in which the study takes place, the essential elements of this research centre on *Process* and *Product* variables.

In terms of *Process* variables detailed observations were made of teachers' verbal behaviour. Teachers in a range of schools were recorded on audiotape and the verbal behaviour was analysed, particular attention being paid to their use of praise and admonishment, the frequency with which this occurs and other aspects of its quality.

In terms of *Product* the major variable under examination will be the behaviour of the pupils, especially their on-task behaviour. On-task behaviour is a product variable that has been used in a number of research

studies i.e. Bennett (1978), Fitz-Gibbon and Clark, (1982). A major assumption is made in these studies that time on task is one crucial determinant of pupil learning. As Denscombe (1980) and Woods (1979) point out this assumption is not always the case if the tasks set by the teachers are inappropriate. However it is the case that it is difficult to imagine any learning taking place if pupils are not attending to the task they have been given. We also have evidence from teachers themselves, Gray and Sime (1988) that getting pupils to engage in learning activities and maintaining their concentration remains the major goal for most teachers.

This research has thus limited the *Process* variables to recording and analysing in detail teacher verbal behaviour. Other research i.e. the work of Merrett and Wheldall has included other aspects of teacher feedback including non-verbal feedback, such as smiling and frowning. However the inclusion of such variables can lead to a number of methodological difficulties such as defining what constitutes each episode of non-verbal behaviour as well as difficulties in recording such behaviour. In terms of *Product* variables this research has limited itself to looking at only one variable, that of on-task behaviour. By limiting the scope of this research to these limited variables it was possible to establish a clear relationship between the two of them and so be in a position to give teachers clear and concise advice on ways that they could improve behaviour in the classroom.

## Theoretical Models of pupil behaviour

A number of theoretical models have been used to provide an explanation or basis for children's behaviour in school. Davie (1993) outlines five different models, Potter (2000) cites seven models ranging from the psychodynamic to systems theory. A theory by itself is of little value unless it can fulfil two basic requisites. First it can provide a perspective or angle to look at children's behaviour and thereby help provide some insight or rationale which may explain the reasons that make children behave in the way they do. Second and most important as far as teachers are concerned a theory needs to be judged as to what extent can any theoretical insight or understanding lead to practical advice which when implemented can produce improved pupil behaviour and learning in their classroom or school.

The five models described by Davie (1993) are outlined below together with a brief description of ways in which they have been used within the context of school based behaviour by various practitioners. These theories are presented in roughly chronological order.

### Psychodynamic

These are a series of theoretical models, which found their origin in the work of Sigmund Freud e.g. Adler, Bowlby, Erikson, Klien and Winnicott. Brown and Pedler (1979) outline five common features or

assumptions which are inherent in all these models; unconscious processes, anxiety and psychic pain, defence mechanisms, motivational drives and developmental phases which can all affect behaviour. The fundamental basis for these theories is the way in which the unconscious exerts a powerful influence on both feelings and behaviour.

These theories are therefore largely accounts of how the effects of early childhood experience affect current behaviour. Such accounts have therefore been used primarily as a basis for practitioners, usually child therapists, in their work with individual children and have not been widely used in whole class or whole school interventions. The only exception to this is the work of Dinkmeyer and Dreikus (1963). They were greatly influenced by the work of Alfred Adler (1870-1937) that put great value on the role that self-evaluation, perceived self worth and self-esteem had upon child and adult behaviour. Dinkmeyer and Dreikus (1963) used this as a basis for the advice they gave to both parents and teachers. They emphasised the value of encouragement of children, the need to help children find appropriate rather than inappropriate ways of having their needs met. They argued for more democratic student-teacher relationships in which school and class rules are negotiated rather than imposed and for schools to abandon competition between pupils.

Their work has had considerable influence on a great deal of educational thought especially in the U.K. in the 1970s. Some of the principles can still be seen in the advice to teachers in 'Building a Better



Behaved School', Galvin, Mercer and Costa (1990). However the work of neither Dinkmeyer and Dreikus nor Galvin et al have been subject to systematic evaluation so however sound some of their ideas and recommendations to teachers have been, it is difficult to know the effect that they have had on pupil behaviour, either at an individual or whole class basis. Marzillier (2004) has also recently pointed out the evidence base for the effectiveness of a great deal of psychotherapeutic interventions is often thin. In the absence of such evidence it is difficult to recommend teachers that they adopt such approaches.

#### Behavioural

This model was based on the work of a variety of experimental psychologists. Unlike psychodynamic models it makes no assumptions about the unconscious or indeed inner processes. Essentially it is based on learning theory and the quintessential principal that behaviour that is reinforced whether by accident or design, tends to reoccur or gain in strength, while behaviour that is not reinforced will tend to disappear. The behaviourist is concerned with observable behaviour. Thus their approach to classroom behaviour might involve behavioural analysis, a period of direct observation in the classroom, trying to assess what aspects of current teacher practice influence the pupils' behaviour. Such analysis might be followed by an intervention in which aspects of teacher behaviour might be modified with the aim of changing pupil behaviour, a process called behaviour modification.

Potter (2000) cites three behavioural-based approaches currently used in schools:

- 1) Limit-setting approaches such as 'Assertive Discipline', Canter and Canter (1992). In this approach a classroom discipline plan is devised by the teacher which includes, a clear set of class rules, praise and rewards are given to pupils who conform and a set of graded sanctions are administered to pupils who choose not to conform. Advice is also given on whole school approaches.
- 2) Applied behaviour analysis, in which teachers are taught to attempt to analyse pupil behaviour in terms of looking at the antecedents to classroom behaviour, i.e. level of difficulty of work or seating arrangements, and then the consequences of the same behaviour i.e. teacher or pupil attention. Teachers are then trained to modify or change aspects of both the antecedents and the consequences in an attempt to change or modify the pupils' behaviour. She cites Wheldall and Merrett's 'Batpack' (1988) as a good example of this approach.
- 3) Cognitive-behaviourism focuses on student self-management and also offers advice to teachers on managing their own thinking and hence their approach to teaching. The theory addresses pupils' attitude to learning and behaviour and their ability to organize themselves and achieve certain standards of both work and behaviour. The aim is for students to become independent managers of their own behaviour rather than dependent upon teachers to have to manage them. This

approach has been used by a number of practitioners including Kaplan and Carter (1995) and McNamara and Heard (1976) and is included in the approach of Rogers (1998).

The strength of the behavioural approaches is that because they have been essentially founded on the basic principals of experimental psychology, they have been subject to considerable evaluation of their effectiveness. The limit-setting approach has been evaluated by Swinson and Melling (1995) and others and the behavioural analysis approach by Wheedal Houghton, Merrett and Baddeley (1989). Therefore teachers who adopt these principals into their teaching do so in the knowledge that the methods are of proven effectiveness.

#### Humanist

The third major theoretical model is that of Humanistic psychology. These theories derived as a reaction against the positivism of empirical sciences. They reject 'mechanistic' explanations of human behaviour or generalizations about causal explanations. For humanists the individual is unique and at the centre of the theoretical model. Therefore an individuals perception of themselves and the world around them is paramount.

This model has been used in schools in the U.K. by Visser (1983) in his work in schools. His approach is to consult students themselves over all issues around the organisation of the school and the way classes are run. The dialogue between students and teachers thus establishes an

agreement on issues such as class rules and organisation. More recently there has been a growing trend to incorporate the concept of 'Emotional Intelligence' into work in schools and therefore to use approaches such as solution focussed brief therapy at a whole school level, see Rhodes (1993). In the U.S.A. this humanistic approach has been incorporated into the work of Glasser (1998). His work is based on the humanistic assumptions that all children have basic needs of love, a sense of belonging, of power, freedom and fun. He argues that students will be motivated to produce high quality work and behave responsibly if those needs can be met. Schools therefore need to be democratic, the curricula relevant and children to be loved and their opinions valued. He suggests conflicts in schools are better resolved through problem solving rather than punishment or parental involvement.

Despite a growing trend to incorporate humanist ideas into intervention work in schools and in school improvement, these approaches have rarely been the subject of empirical evaluation.

### Ecosystemic

This theoretical position is not new. It was first proposed by Lewin (1935). It is based on the proposition that behaviour does not occur in isolation, but is influenced by factors in the surrounding environment. Thus it is model that most easily fits with the work of Rutter et al (1979), Reynolds (1992) and Mortimore et al (1988) into school effectiveness.

They discovered that schools varied tremendously in the outcomes in terms of both exam success and behaviour. They related these varying outcomes to environmental factors with each school. These included not only how the school was managed but also factors like presence of graffiti, state of decoration and whether there were potted plants in the corridors. Reynolds (1992) also showed how by changing aspects of the school environment outcomes for schools could improve. Cooper and Upton (1990) and Faupel (1990) also argued for an ecosystemic approach to conceptualize challenging pupil behaviour and as a means of understanding the origins of such behaviour in schools. Their work borders onto the penultimate of Davie's theoretical approaches, that of systems theory.

### Systems Theory

Systems theory draws heavily from work with families and in particular, solution focused therapy. It takes the view that schools are like families. They can be extremely complex and that it is impossible to consider one aspect of the family or school in isolation from the rest. Any individual part is one small piece of a complex system, which is interdependent on all other parts. Any system is invariably complex in which a number of completing variables interact with one another therefore inevitably there is more to any system than the sum of all its parts. Systems theory provides a framework for thinking about reoccurring

problems in new ways. The theory conceptualizes that behaviour problems arise when behaviour is mishandled or an attempted solution has not worked. Change can be affected by changing how behaviour is handled. To do this previous attempted solutions need to be identified and a different approach needs to be tried.

Davie (1980) used this approach to help teachers understand the processes at work in their school. This was later evaluated by Phillips et al (1985) but only in terms of changes in teachers' understanding, not in terms of an evaluation of pupil behaviour. Miller (2003) uses such an approach to describe the psychosocial system of student behaviour in schools. He argues that individual and group behavior in schools is influenced by a whole range of interdependent variables, but especially, leadership, policy and procedures, staff culture, pupil culture and both formal and informal groupings of staff and pupils. Miller's model has been used to help schools reflect upon aspects of their functioning and hence to school improvement.

### Labeling Theory

Davie's final model shares with systems theory the idea that behaviour of individuals or groups can never be viewed out of context. Labeling theory is usually attributed to an American sociologist Becker (1963). He argued that what he called deviant behaviour is not intrinsic to the individual but created by society. Thus within any social system, i.e. a

school, rules are set up and therefore expectations of behaviour. When rules are broken, deviancy is created and inevitably those who break the rules are labeled as deviants. In schools the labels we give such children may vary e.g. disaffected, 'EBD', maladjusted, disturbed. What ever the label, Becker argues the effect will be the same. Once labeled the group or individual's behaviour may well change in order to conform to the expectations of the label i.e. pupils' labeled 'EBD' will continue to behave badly. Secondly the rest of society may well treat a labeled individual or group in a different fashion, thereby confirming the group's identity. In schools this phenomenon has been noted by Henry (1989).

Labeling theory and indeed other humanist approaches are often described as phenomenological. Hargraves et al (1975) have pointed out phenomenological approaches are in stark contrast to the kinds of questions asked by empirical scientists who are much more interested in the collection of quantitative data and whose methods are described as positivism. The positive paradigm assumes an objective world which scientific methods can more or less readily represent and measure and hence seeks to predict and explain causal relations among key variables.

The differences between phenomenological and positivistic approaches are apparent when a comparison is made between the range of theories outlined earlier. Davie (1993) suggested that comparison of theoretical explanations of classroom behaviour should be judged in terms of the insight they provide to teachers and second the degree to which this

insight leads to practical advice that can be incorporated into teaching practice.

While all the theories can claim to provide insight, they do vary in the extent to which teachers have been able to incorporate the ideas they generate into mainstream practice. They also vary to the extent to which the theories can be seen to be applicable to individual children or to whole class approaches. A good example of this is the psychodynamic approach, which has been used a great deal in terms of individual therapy, but has not generally been incorporated into general classroom practice. At the other end of the spectrum is systems theory which as Potter (2000) points out has been more concerned with whole school approaches rather than with work with individuals or class based interventions.

The theoretical approaches also differ in respect to the extent to which the application of the various theoretical approaches has led to an evidence base of their effectiveness. As O'Donohue and Krasner (1995) point out the evidence base for almost all interventions based on the application of behaviourist theory is almost invariably more substantial than for non-behaviourist theories. A great deal of this evidence base is presented in chapter 2 of this study.

The focus of this study is the behaviour of pupils and teachers in classrooms. It has adopted a very empirical approach to the collection of quantitative data, which has led to very practical advice being offered to teachers. The effectiveness of this advice has been further evaluated using



robust empirical methods. For this reason the theoretical basis of this study comes very much from the behaviourist/cognitive-behavioural tradition and especially applied behavioural analysis in which the behaviour of pupils is evaluated in terms of the effect that both antecedents and consequences surrounding that behaviour. However as will be shown in later in chapter 4 it is possible view the results of this research from other theoretical perspectives which may provide an additional insight into the way in which teachers and their pupils interact.

This research is divided into two separate but related studies. In the first study, reported in chapter 2, a detailed analysis was made of teachers' use of verbal feedback in their classrooms and the relationship this had to pupil behaviour was explored. In the second study, reported in chapter 3, teachers took part in a training programme specifically designed to encourage them to change aspects of the verbal feedback they gave to their pupils. The teachers and pupils were observed both prior to and after the teachers had received some training aimed at increasing both the quality and quantity of their feedback. Thus the effect that changes in teacher feedback had on pupil behaviour was examined and the viability of training teachers to change their teaching practice was explored.

## Chapter 2

### **A study of the quality and quantity of teacher verbal feedback and its relationship to pupil behaviour.**

#### Review of Literature

##### Introduction of review

Today it is a widely held view that the behaviour of individuals or groups can be influenced or changed as a result of variations in their immediate environment. A very early account of this phenomenon in education is provided by White (1975), citing a study by Gilchrist (1916) who reported an improvement on pupils' test performance as a result of praise by the teacher. This notion that the immediate environment influences behaviour was developed over the course of the last century largely as a result of the influence of a particular school of psychology, which introduced the concept of *behaviourism*. Behaviourism as an idea developed from the early experimental work with animals conducted by Thorndike (1898) and was clarified as an approach in a famous paper by Watson (1913) called 'Psychology as a behaviourist views it'. This paper is often referred to as 'the behaviourist manifesto'. These ideas were given greater clarity by J.R. Kantor in his book of 1924 'Principles of psychology' and later by what Skinner (1938) called operant conditioning.

The work of B.F. Skinner was hugely influential in this area, his book *The Behaviour of Organisms* (1953) was to shape a great deal of psychological investigation and thought over the following fifty years.

One area in which Skinner's influence was felt was in the area of social learning theory. Social learning theory focuses on the way in which the behaviour patterns that people develop in response to events in their environment. Social learning theory differs from strict behaviourism in that it stresses cognitive processes. Bandura (1973) developed the theory especially in relation to children's' development. He argued that children learn not only as a result of the learned consequences of certain behaviours but also by observing the actions and consequences of others. Children he argued can learn to represent situations mentally and hence are able to foresee the likely consequences of their actions and alter their behaviour accordingly. In 1986 Bandura developed this theory further, developing what he calls social-cognitive theory. This theory emphasises 'reciprocal determinism, in which external determinants of behaviour, rewards and punishments and internal determinants, beliefs and expectations are part of a systems of interacting influences that effect both behaviour and other parts of the system. In fact the relationship between environment and behaviour is essentially a reciprocal one in which not only does the environment influence behaviour but that this in turn affects the

environment we find ourselves in , which may in turn influence our behaviour and so on.

This work had major implications for teaching practices and the way in which teachers could influence or change the behaviour of their pupils. Madsen, Becker and Thomas (1968), page 115 in O'Leary and O'Leary (1972) put it very succinctly when they wrote;

*'Modern learning theory is slowly but surely increasing its potential for impact upon social problems...the importance of learning principles in everyday life becomes clearer. The contribution of these developments to childrearing and education appears to be especially significant'.*

Social learning theory was applied in essentially two ways. First it was used as a basis for the treatment of individual cases. This could involve a clinic based intervention e.g. Bijou (1965) or in a school based intervention e.g. Wolf, et al (1970), when the child's behaviour was modified in their own classroom. This type of intervention took the form of the psychologist or therapist isolating a behaviour or group of behaviours that they wished to discourage, i.e. aggressive play, identifying a group of behaviours they wished to encourage and introducing a programme whereby praise and attention were given to the subjects

contingent upon the desired behaviour. Evaluations were then made on the extent to which the behaviour of the children had in fact changed. A number of good examples of this approach can be found in an extremely influential collection of papers published in early 1970s, 'Classroom Management: The successful use of Behaviour Modification in the Classroom', O'Leary and O'Leary (1972)

This book also contains a group of studies which involved attempting to change or modify the behaviour of groups of disruptive individuals within classes. In America such work was pioneered by Charles Madsen in his classic study of 1968, 'Rules, Praise and Ignoring; Elements of Elementary Classroom Control.' Madsen, Becker and Thomas (1968). Madsen's study involved two teachers from an elementary school and was focused on three children all aged around seven. The three children were nominated by their teachers because of their disruptive behaviour. Their behaviour included not working, fiddling with objects on the desk, talking, doing nothing, misbehaving by bothering others, walking around the room and in one case beginning to hit out at other pupils. Careful and structured observations were carried out on the children by trained observers over a twelve-week period. Over the course of time Madsen and his colleagues encouraged the teachers to vary the way in which they ran the class and responded to the children's behaviour. They encouraged the teachers to introduce class rules and outlined a series

of rewards, praise and sanctions. In summary form the interventions and outcomes in terms of the pupil's behaviour were: -

Time	Action	Outcome
Week 1/2	Observers record behaviour	Misbehaviour frequent
Week 3	Teacher explained and reviewed rules with pupils	Misbehaviour frequent
Week 4/5	Rules continued and misbehaviour Ignored	Misbehaviour increased
Week 6/7	Rules and ignoring continued Smiles and praise given for following rules	Misbehaviour greatly decreased
Week 8/9	Rules, ignoring and praise Discontinued	Misbehaviour increases to former level
Weeks 10/12	Rules, ignoring and praise and smiles reinstated	Misbehaviour decreases more than in weeks 6/7

Madsen was able to conclude: -

- 1) Rules on their own had very little effect;
- 2) Ignoring the misbehaviour led to it increasing
- 3) When regular, contingent praise and attention were given to children for appropriate behaviour and rule breaking was ignored there was a striking decrease in misbehaviour.

- 4) When the baseline conditions were reintroduced, the rate of misbehaviour went up again, only to fall more dramatically when the intervention programme was reintroduced.

Madsen only recorded the behaviour of the three difficult children. No formal observations were carried out on the rest of the class. However at the end of the article he notes, 'observer comments indicate dramatic changes in the whole atmosphere of the classroom and in the teachers' enjoyment of the classes when the programme was reintroduce at the end of the observations.' This phenomenon of the behaviour of the whole class changing as a result of an intervention with one or two individuals in the class is called the ripple effect, and has been noted in other studies e.g. Harrop (1978)

Interventions with whole classes also appear in the literature. An early study was one by Barrish, Saunders and Wolf (1969), which they called the 'Good Behaviour Game'. In this game the class was divided into teams, points were then awarded for clearly established criteria of good behaviour and work. Initially the investigators reported improved behaviour, an improvement that was not maintained; largely it would appear by lack of enthusiasm by the teacher. This study was repeated in Great Britain by Merrett and Wheldall (1978), with similar results. They also report a number of other whole class interventions aimed at a variety

of behaviours. Through the use of contingent praise and sometimes a reward of a star or even a 'smartie', they were able to improve a wide range of behaviours; reducing swearing in 4 year olds, improving eating behaviours in 3 year olds, increasing tidiness in 5 year olds, increasing on-task behaviour and moving around the class quietly in junior classrooms, Wheldall and Merrett (1989).

There is also some evidence that this approach can be successful with older pupils. McAllister, Stachowiak, Bear and Conderman (1969) improved behaviour of a secondary school class by use of whole class praise and explicit personal disapproval. Long and Williams (1973), Nau, VanHoten and O'Neil (1981) and Wilson and Hopkins (1973) noted similar improvements. In Great Britain, McNamara and Heard (1976) noted improvements following the introduction of self-recording techniques in which pupils recorded their own behaviour. Similar results were also recorded by Blundell and Merrett (1982). These studies tended to focus on individual students or groups of students within the class.

Other studies have examined the behaviour of whole classes deploying the rules, praise and ignore technique pioneered by Madsen and his colleagues have also been reported with a range of pupils. For example Wheldall and Merrett (1986) and Scot, McNamara and McPherson (1986) with 12 year olds, Wheldall and Merrett (1987) with a group of 13 year



olds in Home Economic lessons and Wheldall and Austin (1980) with a group of 15 year old reluctant learners. Frankland, Pitchford and Pitchford (1985) used the approach but added a points system to augment the praise. Houghton (1988) also used the approach, but ensured that both the praise and reprimand were given to the pupils privately again with very positive results

These experimental studies would appear to suggest that by manipulating the nature and quantity of feedback given to pupils, especially the use of reprimand and praise then the behaviour of pupils would change. However this gives rise to a series of questions concerning teachers' use of feedback to their pupils and the relationship that this may have to the behaviour of pupils in those classes:

How often do teachers praise their pupils?

How often do they tell them off?

What effect does both the frequency of both these types of verbal feedback have on the pupils' behaviour?

Are there other aspects of verbal feedback that might have an influence on pupil behaviour?

To what extent does the use of reprimand and praise vary between teachers who teach pupils of different ages?

These questions form much of the central theme of this thesis. Over the years there have been a number of investigations that have centered on the way that teachers use verbal feedback in their teaching and the influence that such feedback had on pupil behaviour.

### **Studies of Natural Rates of Teacher Feedback**

One of the early attempts to look at this whole area was the work of White (1975). Her study used a Meta analysis of sixteen separate classroom observation studies. Rates of teacher approval and disapproval were recorded on an observational schedule known as TAD, an acronym for Teacher Approval and Disapproval Observation Record. White and her colleagues only recorded teacher's verbal behaviour. A distinction was made between what she classified as instructional and managerial responses. Later studies have also made this distinction but tend to use terminology where a distinction is made between teachers' responses to academic behaviour (instructional) and social behaviour (managerial).

White (1975) found those teachers of the youngest children, Grades one and two, equivalent to infant children in the UK, gave more approval to their pupils than disapproval. However the opposite appeared to be the case for teachers of older pupils i.e. teachers of junior and secondary pupils. She also reported that both approval and disapproval

rates declined in higher grades. So it would appear that American teachers were gradually giving their pupils less verbal feedback when they taught successively older groups of pupils. White's data are presented as a listing of the results of 12 studies each utilising different numbers of teachers observed for varying times so it is difficult to calculate the exact mean rates of approval and disapproval. Close scrutiny of the data, however, indicates overall rates of approval per minute to be approximately in the order of 0.3, 0.4 and 0.2 for the equivalents of infant, junior and secondary levels respectively. Corresponding rates of disapproval were found to be in the order of 0.3, 0.6 and 0.4.

When the teacher behaviour was analysed in terms of instructional and managerial responses, White found that teachers gave highest rates of approval for instructional behaviour, while for managerial behaviour the reverse was true. Indeed the rate of teacher approval was so low for managerial behaviour that White described it as 'almost non-existent'.

The results of other early investigations, Heller and White (1975) and Thomas, Presland, Grant and Glynn (1978) tended to support White's findings. The Heller and White study involved comparing the teacher styles used by teachers of higher and lower ability children. They found that the teachers of lower ability children tended to use more disapproval especially of a 'managerial' type than when they were teaching more able

pupils. The Thomas et al (1978) study was carried out in New Zealand with teachers of grade 7 pupils, aged between 11 years 6 months and 13 years 6 months. They found rates of negative feedback on average nearly three times higher than rates of positive feedback. This might suggest that the pattern of teacher behaviour was common across cultures and countries. Further support for White's results was added by an extensive study by Rutter, Maughan, Mortimore and Ouston (1979) based on observations in 12 secondary schools in London, involving 402 different lessons. They report that reprimands occurred approximately twice as often as did teacher praise.

White's findings remained unchallenged for the rest of the 1970s. A series of other investigations since that time have tended to contradict much of her early work. Strain, Lambert, Kerr, Stagg and Lenker (1983), reported that teachers of children, even those in the earlier grades, tended to give more negative than positive comments. Nafpaktitis, Mayer and Butterworth (1985) observed teacher verbal feedback in 29 intermediate schools in Los Angeles, (equivalent to younger secondary pupils). They found approval to be more frequent than disapproval in grades 6 to 9. Nafpaktitis et al's work included one important feature in their study, which was very different from White's and other earlier work as they included non-verbal approval and disapproval in their observations. However the inclusion of this additional feature did not appear to alter

their basic finding, that the teachers in their sample give more positive feedback, both verbal and non-verbal than they gave negative feedback.

Later studies however questioned White's findings. Wyatt and Hawkins (1987) used a modified version of White's 'TAD' schedule. Although like White, they found mean rates of both approval and disapproval were highest in classrooms for the youngest pupils, they found that in all age groups approval was more common than disapproval. They also recorded the on and off task behaviour of the pupils in each class and were surprised to find a lack of any association between teachers' use of approval and disapproval and pupil behaviour. They acknowledge that this might have been a consequence of the recording method in that they only recorded task orientation when approval or disapproval occurred. Thus, it is probable that they under-recorded on-task behaviour as it was only this was only noted when teachers gave approval.

Wyatt and Hawkins (1987) made further criticisms of White's work. These criticisms centred on; the brevity of the definitions used to describe the teachers responses, the lack of details of the number of observation taken in each classroom and the fact that inter-observer agreement was calculated for a second study but not for the investigation which yielded the approval/disapproval data. As a consequence and in the light of the study of Nefpaktitis et al (1985) Wyatt and Hawkins (1987)

conducted what was a much more methodologically sophisticated investigation, involving observations of 35 school teachers in the USA from those teaching grade 1 (reception) to grade 12 (sixteen year olds).

In addition they also examined whether or not teachers used a description of the work or behaviour as part of the feedback. They found that approval with description e.g. 'Well done Billy, for writing so neatly', was twice as frequent as approval without description, e.g. 'Well done Billy'. As for disapproval, the rate with a description was five times as common as disapproval without a description. Their results are summarised in Table 1

**Table 1**

**Rate of approval and disapproval with or without description, Wyatt & Hawkins (1987)**

	With description	Without description
Approval	.26	.13
Disapproval	.26	.05

The American teachers in their study used admonishments with descriptions five times more frequently than they used admonishments without a description. Wyatt and Hawkins point out that in fact the use of

descriptions in these circumstances is very sound educational practice as pupils always knows exactly what behaviour or aspect of their work they are either being praised or admonished. This might not always be apparent to them in the absence of any description. Both Cooper, Heron and Heward, (1987) and later Rodgers and Iwata (1991) make the point that better learning results when pupils are told not only that they have earned approval or disapproval, but also why they have earned or deserved such a response.

Three other studies looked at the way teachers responded to different types of pupil. Russell and Lin (1977) conducted a study in an Australian secondary school to examine the way that the one teacher responded to a group of children classified by other teachers who taught them as the 'worst behaved' and those classified as 'best behaved'. Observers recorded not only the teacher's praise and criticism but also contact, facial attention and ignoring. They found that the teacher gave far more attention to the 'worst behaved' group both in terms of attention for inappropriate behaviour (admonishment, frowning etc) but also their appropriate behaviour, (praise). Russell and Lin argued that the appropriate behaviour of the 'best behaved' group was not being maintained by the teacher attention. This was however a very small study involving only one teacher in one class.

A larger study by Fry (1983) observed teacher-pupil interactions over a four-month period in a junior school. Fry did not record teacher approvals and disapproval directly, but used a method involving an observational schedule that measured 15 teacher-pupil variables covering eight teacher behaviours and seven pupil behaviours. Fry (1983) found that the 'problem pupils' received more negative attention and less positive attention than the other pupils. Contrary to the findings of Russell and Lin (1977), in this study the problem children had fewer social contacts with their teachers and were asked fewer questions than the other pupils. Interestingly, Fry found that the differences in teacher attention became more exaggerated over the four month period of the study. As this group appears to have received much less teacher attention it is perhaps not surprisingly the behaviour of 'problem children' showed a decline over the four month period.

The third of this group of studies, Strain, Lambert, Kerr and Lenkner (1983) investigated the behaviour of 19 teachers and their pupils. These children were young, from kindergarten to Grade 3 (eight year olds). Children were rated by their teachers on the basis of their adjustment to school. Strain et al (1983) recorded teacher's gestures as well as verbal responses. They found that the teachers only responded to the children's compliance to any request at a ratio of once every ten episodes. The vast majority (82%) of the children rated as poorly adjusted to school never received any positive social consequences compared with



only 27% of the high rated group. This relationship between feedback by teachers and compliance is an issue that has also been considered in a series of studies by Brophy (1981) and her colleagues.

Brophy (1981) reviewed a series of six studies she conducted with colleagues between 1973 and 1980 with both primary and secondary aged pupils in the USA. Generally she reported that teachers showed more approval than disapproval, were more likely to approve of academic behaviour than disapprove of it, frequently disapproved of social behaviour and were least likely to approve of social behaviour. Brophy makes the point that it is important to make a distinction between teacher's use of praise and criticism and simple feedback statements. This is an central issue. Brophy argues that in her view, feedback is virtually never harmful whereas praise may be. She also concedes that the distinction between the two may be difficult to decide, 'when for instance, a teacher says 'Correct' whether it includes an evaluative component or is pure feedback', (p116). Brophy's point is very important one. She argues that it is feedback that influences pupil behaviour not merely praise or admonishment. She also makes the point that variations in reported rates of teacher feedback of both a positive or negative type, may be as a result of different methodologies used by different researchers, but most crucially centre around the definitions used by researchers as to what constitutes the categories of feedback.

## **British Studies**

A major study was carried out in the 1970's into junior classroom practice which took as one of its foci teacher's use of language and its relationship to pupils' learning by Galton, Simon and Croll (1980). Their observations recorded only teacher praise and criticism rather than broader criteria of positive and negative feedback. They reported rates of teacher praise to be around half those for statements of what they called 'critical control', a category that appears primarily to be concerned with feedback about behaviour and did not include any comments teachers may have made about the pupils' work. The definitions used in this study are not precise and the methodology is poor, for instance no inter-observer reliability was calculated. Hence their results should be treated with caution.

At around a similar time Michael Rutter and his colleagues were engaged in a major study of secondary schools in what was then the Inner London Education Authority. The report of their research was entitled '15,000 hours', the length of time each pupil spent in secondary education, Rutter, Maughan Mortimore and Ouston (1979). Their research used a broadly based observation schedule comprising five minute sessions in which observers recorded examples of examples of praise or punishment

and 'marked expressions of warmth or negativity'. Rates of teacher approval and disapproval appeared to show that frequent disciplinary interventions were associated with inappropriate behaviour. They noted that this approach was not necessarily that effective as they recorded that, 'innumerable interruptions to the flow of lessons which involved constant checking and reprimands, appeared to perpetuate any behaviour disturbance.' The absolute rates of teacher praise to pupils' work were very low, usually three or four instances per lesson.

A comparison between these two studies and the earlier American work is difficult, as actual rates of teacher feedback were not recorded. However this is not the case in a major series of studies that were carried out in the 1980's by a team based at the education department at Birmingham University.

Merrett and Wheldall (1986) developed an observation system termed OPTIC (Observing Pupils and Teachers in Classrooms). The system recorded teacher approvals and disapprovals but the observers also recorded any non-verbal behaviour by the teacher that could be interpreted as a positive or negative event, such as smiling or frowning at a pupil. The OPTIC system allows the observer to look at two aspects of classroom behaviour, the behaviour of the teachers and the behaviour of the pupils, specifically their on-task behaviour. The schedule is in two halves. In a

typical observation three minutes is spent recording the teachers' positive and negative responses to the pupils and classified according to whether these responses were directed to the pupils academic or social behaviours. The following three minutes is concerned with observing pupil behaviour in which the observer estimates the student's on-task behaviour by observing each pupil in turn. The observers in much of Merrett and Wheldall's early work were teachers who were taking part in series of workshops on pupil behaviour. They were all trained to use OPTIC as part of the course. The inter-observer agreement of this schedule is reported as averaging over 90% (Merrett and Wheldall, 1986, Merrett and Wheldall, 1987).

Merrett and Wheldall (1987) used their OPTIC schedule to examine the rates of teacher approval and disapproval in British primary and middle schools. Teachers who had attended courses at the university carried out the observations. In total 128 teachers took part in the research. It was found that in general teachers gave more approval than disapproval, but that the majority of this approval was directed towards work rather than behaviour. Conversely more disapproval was directed towards behaviour than work. The actual proportions of feedback are presented in table 2.

**Table 2**

**Percentage of Feedback given by 128 Primary and Middle school teachers to their pupils (Merrett and Wheldall, 1987)**

Behaviour	Approval	Disapproval	Total
Academic	50	16	66
Social	6	28	34
Total	56	44	100

In terms of rates of approval and disapproval they found very similar mean rate of approval in this study of 1.15 per minute to that found by Nafpaktitis et al (1985) of 1.3 per minute. However the mean rate of disapproval was somewhat higher, 0.93 per minute, compared with that found by Nafpaktitis of 0.29 per minute.

The OPTIC schedule also allowed Merrett and Wheldall to examine the relationship between the teachers' use of feedback and the behaviour of the pupils. Very small correlations were found. They found a small, but significant negative correlation between with disapproval to academic behaviour and on-task behaviour of only -0.15 ( $p < 0.05$ ) and a larger negative correlation between teachers disapproval to social behaviour and on-task behaviour of -0.31 ( $p < 0.01$ ). They did not find any significant relationship between teachers' positive feedback and pupil behaviour. They acknowledge that their correlational evidence is weak to say the least and appears to justify Brophy's (1981) stance that 'teachers'

verbal praise cannot be equated with reinforcement'. However they do argue that relationship between positive teacher feedback and pupil behaviour is best demonstrated by experimental data, 'there are literally hundreds (probably thousands) of published studies demonstrating that contingent specific teacher praise can and does increase a wide variety of behaviours.' (page 102).

They also pointed out that it appeared to be the case that 'teachers were very quick to notice social behaviour of which they disapprove and continually nag children about it...but they hardly ever approve of desirable social behaviour. In other words, children are expected to behave well and are continually reprimanded if they do not.'(page 100). They suggest that the correlations they report are as a result of teachers responding to children's behaviour rather than teachers acting in a proactive manner.

In a second study, also using the OPTIC schedule and using teacher observers they looked at teacher and pupil behaviour in 130 secondary schools, Wheldall, Houghton and Merrett (1989). They found a similar pattern of teacher verbal behaviour to that which they had reported earlier in primary schools as table 3 illustrates.

**Table 3**

**Percentages of Approval and Disapproval to academic and social behaviours in 130 secondary schools, (Wheldall et al, 1989)**

Behaviour	Approval	Disapproval	Total
Academic	45	15	60
Social	10	30	40
Total	55	45	100

Overall the pattern of secondary school teachers' verbal behaviour would seem to be very similar to that of their primary school colleagues in terms of the proportions of feedback. In terms of the rates of approval and disapproval they did find some differences as shown in table 4

**Table 4**

**Rates of verbal feedback in Primary, Middle and Secondary Schools**

	Primary/Middle (Merrett & Wheldall 1987)	Secondary (Wheldall et al 1989)
Total Approval	1.15 per min	0.65 per min
Total Disapproval	0.93 per min	0.53 per min
Total Feedback	2.08 per min	1.18 per min

Thus it would appear that teachers of younger pupils feel the need to provide more feedback to their pupils, but that the proportions of that feedback is very similar to feedback given to all pupils. One important finding to arise from their secondary school study was correlations they

found between the feedback given to the pupils and the pupil's behaviour, which was at a much higher level than previously reported. They report a significant correlation between on-task behaviour and approval for academic behaviour of 0.44 and between on-task behaviour and approval to social behaviour of 0.37. Similarly a negative correlation was also found between teacher disapproval to social behaviour and the on-task behaviour of pupils of  $-0.32$ .

The fact that these correlations were higher in classrooms of older pupils is of considerable interest and could give rise to a number of alternative explanations. It might suggest that the nature of verbal feedback is more important in influencing the behaviour of the pupils or conversely that the behaviour of older pupils is more important in influencing teacher behaviour. Alternatively it might suggest that for younger pupils there may be other factors in the classroom such as curriculum content, classroom layout, teacher presentation that have greater influence on pupil behaviour.

### **Further Studies**

A number of other studies who also used the OPTIC schedule developed by Merrett and Wheldall (1986) have reported from schools across the English speaking world. Winter (1990) observed 86 secondary



teachers and their classes in Hong Kong. He reported very similar results to those reported by Wheldall et al (1989) in terms of the proportions of verbal feedback given by teachers. He also found strong correlations between teacher approval and on-task behaviour (0.40) but also a strong negative correlation between disapproval and on-task behaviour (-0.40).

Wheldall and Beaman (1994) have given an account of work with teachers in Sydney Australia. They found that their sample of 36 Australian primary school teachers gave very similar proportions of verbal feedback as the British counterparts as reported by Wheldall and Merrett (1987). However the overall Australian rate of teacher responses was about half that of the British teachers. The rate of total approval by Australian teachers was 0.61 per minute, compared with British teachers at 1.15 per minute. Slightly smaller differences were also found in the rates of disapproval. Wheldall and Beaman (1994) also reported on a sample of 79 secondary school teachers and their pupils. Again in comparison with the Wheldall et al (1989) study, the proportions of teacher feedback were very similar between the British and Australian studies, but again the rate of teacher feedback of the Australian teachers was lower.

One study that does not fit this pattern was that reported by Charlton, Lovemore, Essex and Crowie (1995). This research was carried out on the island of St. Helena in the South Atlantic with a sample of

junior aged children (7 to 10 years old) and their teachers. Again they used the OPTIC schedule. Charlton et al reported higher approval rates directed towards both behaviour and learning. In particular for the younger children more teacher responses were directed to social behaviours (57.4%) than to academic behaviours (42.6%). This is the only study to find that approval rates for both social and academic behaviours exceeded disapproval rates. It is true that the population and culture in St. Helena may be very different from the rest of the world, for instance, at the time of the study there was no television on the island. It is also possible that these pupils differ markedly in other characteristics from other populations previously studied. It is noticeable that the vast majority of other studies have been carried out in schools in essentially urban areas. St. Helena in contrast is essentially an isolated rural environment. What is clear however is that the teachers in that particular school appear to be on the right track as far as classroom management is concerned, they report on-task rates of 96% for the younger children in their sample and 92% for the older children. As Beaman and Wheldall (2000), page 442, point out the behaviour of the pupils and the responses of the St. Helena teachers', suggest that the classrooms of St. Helena could be exemplars of effective classroom behaviour management.'

## Concluding remarks

As a whole the studies published over the last twenty-five years appear to be less than consistent in their findings. This variability may be due to changes in teacher practice over that time for example the move to whole class teaching, differences in cultural or national characteristics of both teachers and pupils, and also to the methodology employed by the different research teams, for example:

- a) The methods used for recording teachers' verbal and/or non-verbal behaviour.
- b) Whether only verbal or verbal and non-verbal behaviour was recorded
- c) The criteria used by the observer for indicating approval or disapproval.

Early studies, such as reported by White (1975), used an observation schedule called TAD (Teacher Approval and Disapproval Record). Approval was defined as 'verbal praise or encouragement' and disapproval as 'a verbal criticism, reproach, or a statement that the student's behaviour should change from what was unacceptable to acceptable to the teacher'. It is clear that White and her colleagues were only recording verbal behaviour and using a reasonably tight definition of verbal praise. Brophy (1981) points out that to use a restricted definition

of approval, to only include praise and encouragement may mean missing some aspects of teacher verbal behaviour that might also affect the pupils' behaviour. If when asked what is  $2 + 2$ , a child states '4' and the teacher then responds '4' or just 'correct', it could be argued such an interaction does not constitute praise or approval. However the child may have learnt that their answer was right and therefore deemed to have learnt to do the simple addition sum. Brophy argues therefore it is important to record such teacher-student interactions, which could be regarded as encouraging. These were included in the Brophy-Good dyadic interactions coding system, which she used in her research. This included all responses such as the teacher repeating the right answer or any acknowledgement that the right answer has been given or the acceptable behaviour is being followed.

A second feature of teacher feedback that is included in many of the later studies is the element of non-verbal behaviour. Russell and Lin (1977) broadened 'positive teacher attention or response' to include 'contact, praise, facial attention and academic recognition'. Many subsequent studies have also included elements of non-verbal feedback, i.e. Fry (1983), Strain et al (1987), Nafpaktitis et al (1985) and indeed all those studies by Wheldall and his colleagues that used the OPTIC schedule. The OPTIC schedule defines teacher approval in terms of 'positive events', both verbal and non-verbal. As in studies that only record verbal behaviour, the definitions used in each schedule is crucial.

Although each observational schedule is subject to measure of reliability and accuracy, which is assessed in terms of inter observer reliability, comparisons between studies is difficult unless a series of studies use the same schedule and the observers are trained to similar degree of reliability.

All of the studies considered in this review, used direct observation to gather information on teacher's verbal and non-verbal behaviour. Very few of the studies used continuous observation. The TAD schedule used by White (1975) and others expects the observer to spend 20 seconds immediately after each teacher approval or disapproval to make a verbatim record of exactly what was said. Those studies, which also recorded the on-task behaviour of the pupils, followed a procedure of allowing the observer to spend a period of time recording teacher's behaviour followed by a period of observing the pupils. Wyatt and Hawkins (1987) used a partial interval technique that involved ten seconds of pupil and teacher observation followed by ten seconds of recording. In the case of those studies, which used the OPTIC schedule, the observer's time was split into three-minute periods, three minutes of pupil observation followed by three minutes of recording of teacher verbal and non-verbal behaviour. A similar time allocation was also used by Nafpaktitis et al (1985). In all these studies therefore a record of the teachers verbal behaviour was not continuous with the behaviour of the pupils. It is true the samples of teacher verbal behaviour were collected from the same class on the same

day as the record of pupil behaviour, but these two sets of observations were not contemporaneous. The only study not to use this time sampling method was that of Thomas et al (1978). They had expected the observers to record pupils' on-task behaviour at 10-second intervals and to interrupt these observations to record verbatim any teacher approval or disapproval. Thus in this case the record of the pupil behaviour was not continuous.

The point also needs to be made that there are inherent flaws in all time sampling methods. Harrop, Daniels and Foulkes (1990) point out that especially in this area of classroom observation certain methodological issues have been neglected, both in terms of the accuracy but also of the sensitivity of various observational methods. Classroom observational studies tend to use one of two methods of behavioural recording, momentary time sampling (MTS) and partial interval recording (PIR). In Momentary Time Sampling, a response is scored if it occurs exactly at a predetermined instant. In Partial Interval Recording, a response is scored if it occurs during any part of an interval. In fact some techniques such as Optic (Wheldall and Merrett, 1989) use both methods almost simultaneously. Harrop and Daniels (1986) point out that MTS appears to be more accurate at estimating average rates of frequent behaviours, that estimates of absolute rates are inaccurate in both methods, but that PIR is more sensitive in detecting relative changes in behavioural rates.

The other methodological weakness of many studies which also needs to be considered is the way in which inter-observer agreement is calculated. Harrop, Foulkes and Daniels (1989) recommended that agreement rates should be calculated using the formula kappa (Cohen, 1960), because it takes into account agreements due to chance, since it is easy to get high levels of observer agreement purely by chance when behaviour is occurring (or not occurring) during most of the observational session.

In the light of these methodical difficulties it is surprising that despite the access to sound recording equipment, none of the previous quoted studies have attempted to record on tape the verbal behaviour of teachers in its entirety. This would allow an opportunity for a continuous record of teachers' verbal behaviour to be made and an accurate verbatim account to be made of exactly what teachers have said and allow a much more detailed analysis their feedback. Because the recording was continuous it would not fall foul of the limitations expressed by Harrop and his colleagues inherent in time sampling. Lastly and importantly it would also allow a more simultaneous record to be made of pupils' behaviour.

**Correlations between teacher approval and disapproval and pupil behaviour.**

Although many of the early studies from those of White (1975) onwards assume a relationship between teacher feedback and both learning and behaviour, less than half the studies demonstrate such a link in the form of correlations between different types of feedback and pupil behaviour. The earliest of these was Thomas et al (1978). A table of those studies is produced below: -

**Table 5**

**Studies demonstrating a correlation between teacher feedback and pupil behaviour**

<b>Study</b>	<b>Pupil Age</b>	<b>Correlation</b>
Thomas et al (1978)	Secondary	Approval & On-Task +0.40
		Disapproval & On-Task -0.48
Nafpaktitis et al (1985)	Secondary	Approval & On-Task +0.21
		Disapproval & Off-Task +0.54
Merrett & Wheldall (1987)	Primary	+ve Academic & On-Task +0.10
	& Middle	-ve Social & On-Task -0.31
Merrett et al (1989)	Secondary	+ve Academic & On-Task +0.44
		+ve Social & On-Task +0.37
		-ve Social & On-Task -0.32
Winter (1990)	Secondary	Approval & On-Task +0.40
		Disapproval & On-Task -0.40



It would appear that at secondary level a reasonably consistent pattern could be seen. The majority of studies report a positive correlation between teacher approval and on-task behaviour of around 0.40, while there was also found a negative relationship between disapproval and on-task behaviour of around the same level. The only exception to this is the Neptakis' study, which found a slightly less positive relationship of only +0.20 between approval and on-task behaviour. They expressed the relationship between disapproval and behaviour slightly differently by comparing disapproval to off-task behaviour where they reported a correlation of + .54.

Only two studies have looked at the relationship in younger pupils. Merrett and Wheldall (1987) research was with both primary and middle school pupils between the ages of eight and thirteen. The correlations they found were lower than those for secondary school, although a proportion of their sample was of secondary school age.

As with all correlational studies one must be cautious about any conclusions one might like to make. For instance, it is difficult to know if the relationship between off-task behaviour of the pupils and the amount of negative feedback given by teachers is a product of the teacher responding to a group of poorly behaved pupils by telling them off. On the

other hand is it that the off-task behaviour is a product of a teacher who is using a rather negative style of teaching and as a consequence the pupils are unmotivated and therefore disinclined to work? Of course the converse is also true, well-behaved classes will no doubt elicit positive comments for their teachers. Brophy (1981) discusses this issue of the reciprocal relationship between teacher feedback and pupil behaviour at some length. She also makes the point that there are other aspects of the quality of teacher feedback, which are important in determining pupil behaviour. This is a valid point, but not one that has been the study of extensive investigation.

Many of the early studies simply recorded the number of praise or positive statements made by teachers i.e. White (1975), Thomas et al (1978). Later studies especially those who used the OPTIC schedule, i.e. Winter (1990) Charlton et al (1995) were able to record whether the feedback was directed at either work (academic) or towards the pupils' behaviour (social). This is important in that it gives a clue to the intention behind the teachers' responses, which is another of the issues raised by Brophy. The general finding of Brophy's (1981) research was that on the whole positive feedback by teachers was in the main directed to pupils' work, while negative feedback was on the whole directed to pupils' behaviour. This of course is not new and has been a well-established finding. As Nafpaktitis et al (1985) point out, much of this negative

feedback is in response to incidents of off-task or disruptive behaviour by the pupils and therefore as Brophy (1981) suggests represents a reactive response by the teacher. She argues therefore that in terms of intention, teachers' positive feedback is a proactive response by them to encourage pupils' good work, while the negative feedback is largely a reactive attempt by teachers to reduce disruptive or inappropriate behaviour.

Brophy's (1981) paper was also concerned about other aspects of the quality of teacher feedback. This view is shared by other theorists and practitioners especially those involved with teacher training. Both Canter and Canter (1976) and Rodgers (1989) have made the point that the quality of feedback is a crucial element in encouraging pupils to behave well in class and study hard. It is therefore surprising that there would appear to be a dearth of studies that have looked in more detail into the quality of this aspect of teacher feedback. Only the investigation by Wyatt and Hawkins (1987) seems to have examined this area of teacher behaviour by including in their recording whether teachers' used a description of pupil behaviour in their feedback. Furthermore both Rodgers and the Canters suggest that following any negative feedback teachers should immediately provide the pupil or student with a positive statement of the type of behaviour the teacher expects from the pupil, a redirection, i.e.

*'Stop talking Jamie...You should be working in silence during this test'*

This type of feedback is called a redirection but together with other aspects of the quality of teachers' verbal feedback i.e. uses of descriptions in feedback and use of pupils names, appears not to have been studied in any great degree in naturalistic settings.

Observational studies outlined above provide important evidence of teachers' use of verbal feedback. In addition correlational studies which have examined the relationship between teacher feedback and pupil feedback allow inferences to be made as to how aspects of teacher feedback can influence pupil behaviour. This is the subject of this study. This relationship can be examined further by looking at evidence of training studies in which the key variable of teacher feedback is changed and examining the effect that this may have on pupil behaviour. This is the subject of the second study (Chapter 3) reported in this thesis

## The Aims of the Study

The main aim of this study was to examine teachers' current use of verbal feedback in their classrooms and the relationship this had on the behaviour of their pupils.

### Specific Aims

- i) To measure the rate of positive and negative verbal feedback used by teachers in Infant Junior and Secondary school classes.
- ii) To compare the rate of positive and negative feedback between teachers of each age group.
- iii) To examine the extent to which teachers directed both positive and negative feedback towards individuals, groups or the whole class.
- iv) To examine the quality of verbal feedback in terms of :-
  - a) Teachers' use of the pupils' name
  - b) Teachers' use of description when praising or admonishing pupils
  - c) Teachers' use of a redirection following an admonishment
- v) To examine the relationship between teachers use of positive and negative feedback and the behaviour of their pupils in terms of their on-task behaviour.

# Research Methodology

## Introduction

In this study 50 teachers from a variety of schools were observed in their classrooms. Their natural rate of teacher verbal feedback in classrooms was recorded on audiotape while they taught a class of pupils. At the same time observations of the behaviour of the pupils they were teaching were also recorded on an observational schedule.

## Access to schools.

The schools used in this study were from five different educational authorities in the Northwest of England, Liverpool, Wirral, Cheshire, Salford and Trafford. They were selected because they were known to either the author or a research assistant.

## Access to Teachers

All participating were volunteers. Many were known the author as a result of his work in Liverpool schools or to the research assistant as a result of his contacts in Wirral and Cheshire.

## Ethical Issues.

In all cases the teachers were told that the observations were to be confidential. The results of each classroom observation could be discussed with the teachers themselves, if they wished, but would not be relayed to any one else at the school other than in the form of general feedback, in which case the anonymity of the individual teachers would be safeguarded. This anonymity also extended to the pupils, who were told that the observers were observing their class for research and that no one in school would see the results other than the researchers, themselves.

In the event, most teachers took up the opportunity to discuss the observations with the observer, whereas only a few pupils, mostly at the junior or lower secondary levels, asked how they performed.

## Method

### Sample

Teachers from a range of schools in the Northwest of England were approached, either directly or via their Headteacher. They were asked to allow a series of observations to take place in their classroom. In total 50 teachers agreed to take part, comprising 16 infant teachers, 16 junior teachers and 18 secondary teachers.

## Procedure

It was explained to the teachers that the author wanted to make an audio-record of teachers' verbal behaviour for analysis, and that while this recording was taking place, the pupils in the class would be observed using a simple recording sheet. The teachers who agreed to participate wore a simple radio microphone whilst teaching one lesson to their class. The device was discreet and simple to wear and did not affect their mobility. All teachers seemed at ease with the equipment and no teacher withdrew their consent to participate in the research as a result. A variety of lessons were observed. In the primary schools, infant and junior schools, literacy and numeracy sessions were excluded. In secondary schools most lessons observed were classroom based, but did include a P.E. lesson in a games hall, science in a laboratory and two lessons of craft.

The recording of the teachers' verbal behaviour and the behaviour of the pupils did not start immediately on their arrival in the teaching room. Pupils were allowed to come into the room and find their seat. The observers were often introduced to the class who were then told to ignore their presence. Once the class had begun to settle down the recording of the teacher's verbal behaviour and the behaviour of the pupils' behaviour commenced. Each period of observation lasted approximately 30 minutes.



## Observations of pupil behaviour.

Four different observers were used. They were the author, a research assistant, an educational psychologist in training and a behavioural consultant with considerable teaching experience. All were fully trained to use the Pupil Behaviour Schedule (Jolly and McNamara, 1992), see appendix 1. The training included an explanation of the schedule, a period of observation of the author using the schedule and using the schedule in at least two lessons alongside the author. At the end of the joint observation inter-observer agreement was calculated. In all cases it proved to be above 90% in which case the observer was deemed to be trained.

A formal measure of inter-observer agreement was calculated on the pupil observation schedule. The mean total percentage agreement was high at 92.89%. The statistic Kappa (Cohen 1960), which takes chance agreement into account was also found to be high at 0.75. In fact during one observation, the two observers agreed on all instances of on and off task behaviour leading to a 'perfect' kappa of 1.00. Observer agreement on occurrences (i.e. instances where both observers agree that the pupil was on-task) was 91.73% compared to a chance agreement 67.98%. Observer agreement on non-occurrences (i.e. instances where both

observers agree that the pupil was off-task) was 66.28% compared to a chance agreement of 2.92%. Further details of the observational data and the calculation of Kappa are contained in Appendix 2.

When observing the class each observer sat at the back of the room in a position where they could observe all the pupils. In the case of some of the observations especially the craft lessons in secondary school, the observer was required to move around the room to ensure accurate observation. Detailed instructions of how to use the schedule are contained in Appendix 1. The schedule uses a momentary time sampling technique. The pupils are observed at ten-second intervals in turn around the class. At that instant the pupils are judged to be either on-task or off-task. To be on-task the pupils had to be judged to be following the teachers' instructions and conforming to class rules. For example if the teacher has just worked through an example of a maths problem on the board and instructs the class to all try and work out a second example s/he has written for them, then, to be on task pupils must be judged to be sitting at their desk, pen in hand, exercise book open in front of them trying to calculate and record the answer. If in the judgement of the observer the pupil is not following the instructions then they are recorded as being off-task. The nature of their off-task behaviour was recorded. The schedule has eight such categories.

**i) Inappropriate in-seat behaviour (IS)**

e.g. In-seat fidgeting, turning round, leaning back in chair, sitting out of position, rocking, playing with items.

**ii) Out of seat behaviours (OS)**

e.g. walking around the classroom, leaving class, changing place, climbing on/under/around furniture.

**iii) Shouting out (S)**

e.g. to attract attention of another pupil, shouting out answers inappropriately e.g. without raising hand or making a joke or wisecrack.

**iv) Inappropriate talking (T)**

e.g. social conversations

**v) Disturbing other pupils (DOP)**

e.g. interfering with or damaging possessions/work/person, taking, 'borrowing' throwing property/equipment, making demeaning/disapproving comments about others or singing/chanting or non-verbal noises including whistling and humming.

vi) Arguing with/Challenging teacher (A)

e.g. backchat, refusing to follow instructions, disregarding/ignoring specific teacher instructions, prevarication and petulant behaviour, commenting inappropriately to teacher about work.

vii) Distracting teacher (DT)

e.g. engaging teacher inappropriately, non-task related conversation, making personal comments to teacher about dress/appearance.

viii) Inattentive to task (IN)

e.g. daydreaming, attending to other pupils' behaviour.

Thus a record can be made not only of the instances of on and off task behaviour similar to the OPTIC schedule used by Merrett and Wheldall (1986), but a record can also be made of the nature of the off-task behaviour. The Pupil Behaviour Schedule is devised in such a way that it allows a direct comparison to be made between the judgements of each observer at each episode of the momentary time sample. Inter-observer reliability could not only be calculated in terms of overall agreement, but also in terms of individual event agreement. Therefore the reliability was calculated by use of Kappa (Cohen 1960), see appendix 2.

In methodological terms the use of the Pupil Behaviour Schedule and the methods that were used to calculate its reliability mark a significant development in this area of research from previous studies.

The Pupil Behavioural Schedule also has a facility to record teachers' use of verbal feedback. However this aspect of the schedule was not used during the observations as each teacher was equipped with a radio microphone that allowed everything they said during the observation period to be recorded on audiotape. These audiotapes were the subject of close scrutiny and analysis.

#### Observer training and analysis of audio-tape

The author trained a research assistant to record instances of teacher approval and disapproval from the tapes, and within these categories to record whether the approval or disapproval was given for academic or social behaviours, whether it was given to individuals or groups, the group could be the whole class, whether it was accompanied by description and in the case of disapproval, whether it was accompanied by a redirection. In practice, this procedure involved the development of precise and robust definitions, which were derived after the author and research assistant listened to and recorded the teachers' verbal feedback from the tape independently. Discussions of the recording of agreements

and disagreements, identification of differences of interpretation and refining of definitions then took place. This was aided by the fact that it was possible to identify each piece of verbal feedback by reference to its position on the tape as numbered by the cassette recorder counter. The tape of each lesson was listened to independently by the author and research assistant and each feedback event noted, observer agreement was calculated using 'event agreement', the same procedures used by Wyatt and Hawkin (1987). Event agreement, rather than total sum agreement, was used because, unlike total sum agreement, it checks whether the two observers record the verbal behaviour at the same instances in the same way. This procedure was continued with successive tapes until percentage observer agreement, defined as the number of agreements divided by the sum of the number of agreements and disagreements rose to a percentage above 80% on two successive occasions. From this point the research assistant scored the remainder of the lessons but was aware that three of the lessons, taken at random, would be scored independently by the author and that observer agreement would be calculated.

This procedure was necessary in the light of the work Romanczyk, Kent, Diamant and O'Leary (1973) and of Kent, Kanowitz, O'Leary and Cheiken (1977) which demonstrate that the percentage agreement levels between observers' data may be considered representative of the performance of single observers only when the single observer has no

knowledge of when the checks are to be made. None of the previous research in this area has used this sophisticated method to demonstrate observer agreement

Using these principles, the observer agreement calculated in phase one of the study was, 81.23%, 85.01% and 84.12%. In the second phase of the study a similar comparison showed agreements of 83.45%, 87.91% and 85.06% on randomly selected observations. Observations made in this way are virtually free from chance agreement because decisions do not have to be made at specific instances of time.

Classroom observation of both teachers' and pupil behaviour is not new. The research record extends from Gilchrist (1916) to the present day. More recent research dates from around 1970, i.e. O'Leary and O'Leary (1972) and White (1975) through the work of Wheldall and Merrett in the 1980s to such work as Winter (1990) and Charlton et al (1995). Until relatively recently these studies relied on the recording of essentially transient behaviour of both pupil and teacher behaviour by direct observations in the classroom. It is however difficult to simultaneously record both pupil and teacher behaviour. For this reason the OPTIC record was devised by Whedall and Merrett (1986) and used extensively in both their major studies and by others such as Winter (1990) and Charlton et al (1995). The OPTIC record requires the observer to observe the behaviour the pupils in the class for ten minutes and then to record the verbal

behaviour of the teachers for the same length of time before concentrating on the pupils once again. Thus the teacher and pupil behaviour are not recorded simultaneously and teachers' responses cannot be regarded as contingent upon pupil behaviour. The OPTIC schedule appears to be a mixture of Momentary Time Sampling (MTS) for the pupil on-task behaviour and Partial Interval Recording (PIR) for the teachers' verbal behaviour, each of which has its own inherent weakness. In that Momentary Time Sampling misses a great deal of behaviour and Partial Interval Recording can underestimate the rate of behaviour occurring, (see pages 50-51 for a fuller discussion). The criticism of lack of contingency cannot however be leveled at the other instrument commonly used in this research, the TAD (The Teacher Approval and Disapproval code), see, White et al (1973), White (1975) and Wyatt and Hawkins (1987). To use the TAD teacher and pupil behaviour is observed for 10 seconds. A further 10 seconds is then allowed for the behaviours to be recorded, when the cycle began again. Thus the method is an example of Partial Interval Recording (PIR). The observations on the TAD of pupil and teacher behaviour are contingent. However the time sampling method used means although the teacher and pupil behaviours are observed simultaneously the behaviour observed is not continuous and as a result not all the lesson is recorded. Harrop and Daniels (1986) and Harrop, Daniels and Foulkes (1990) have pointed out, both methods, MTS and PIR, are open to considerable error. Momentary Time Sampling (MTS) appears to be



reasonably accurate estimate of the duration of behaviour provided the behaviour observed isn't of short duration and relatively infrequent. In research of pupil behaviour in classroom this would therefore give an accurate measure of pupil on-task behaviour. However it may not be as accurate in detecting the presence of relatively infrequent behaviour such as some aspects teacher verbal feedback, in which case Partial Interval Recording may be the more accurate method. Both methods however are less accurate than the continuous observation of events used for teacher behaviour in this study.

In addition because of the transient nature of teacher verbal behaviour it is difficult to make an accurate record of what was said and also difficult to assess the reliability of that record, unless an audio recording is made. Equally well without a permanent record it is difficult to measure reliability, other than in the simplest form. A permanent audio recording also allows time for the interpretation, which would otherwise have to be instantaneous. Perhaps it was for this reason that measures made of the reliability of the OPTIC device are invariably in terms only of overall percentage agreement rather than percentage of agreed incidents. Harrop, Foulkes and Daniels (1989) make this point in some detail. Percentage agreement as calculated using the OPTIC schedule merely records the similarity of final scores of two observers; it does not take account of the fact that both observers may have been recording different events. It certainly doesn't take into account any agreements due to

chance. Harrop et al note that using Kappa (Cohen 1960) gives a stringent assessment of the similarities between two observers' scores as it does take chance agreement into consideration.

Thirdly the use of this form of transient record limits the detail that can be recorded e.g. whether the feedback is directed towards work or behaviour, whether negative feedback contains a redirection, teachers' use of names or whether the feedback is directed to individuals or groups.

Given these weaknesses it is surprising that despite the existence of small mobile audio recording instruments for many years so few studies have used the method of recording in their investigations of teacher feedback. The only exceptions to this were the reports by Corrie (1997), Tunstall and Gibbs (1996) and Harrop and Swinson (2003) who used audiotape and Kounin (1970) and Nichols and Houghton (1995) who used video. However neither Corrie (1997) or Tunstall and Gibbs (1996) attempted any detailed analysis of feedback, both their reports were essential descriptive in nature. Harrop and Swinson (2003) on the other hand used the tapes to provide a detailed analysis of teachers' use of questioning. Nichols and Houghton limit their analysis to rates of teacher verbal approval and disapproval. Given the nature of their record it is surprising that they limited their analysis to the OPTIC schedule (Merrett and Wheldall, 1986) and ignored the range of other verbal and non-verbal behaviour they had available to them. Similarly the studies reported by

Kounin (1970) were largely confined to descriptive accounts of what he called 'desist techniques' used by teachers and their effect on pupil behaviour.

Throughout the reported studies a continuous record was made of all teacher verbal behaviour. This allowed a permanent and accurate record to be kept of this behaviour. It allowed a detailed analysis to be made of the behaviour at a depth and breadth absent from other studies. It also enabled the investigator to feel confident of the accuracy and reliability of the data collected.

The wearing of a small microphone and transmitter could have introduced an observer effect, in that the very fact that teachers' were wearing such a device could have affected aspects of their verbal behaviour. It is difficult to judge if there was such an effect or the degree to which it may have effected how teachers behaved. However it is worth pointing out that as the results obtained in this investigation were broadly in line with those other studies that did not use audio recording, i.e. Merrett and Wheldall (1987) or Wyatt and Hawkins (1987), it seems likely that the wearing of a recording device had minimal effect on teachers' behaviour. Certainly the response of teachers immediately after the observation was that they had forgotten they were in fact wearing the device.

A further very important feature of the method used is that it permitted agreement checks to be made without the awareness of both observers. When transient behaviour is observed by two observers and both know they may be subjected to checks of accuracy, then as the work of O'Leary and his colleagues, Romanczyk, Kent, Diament and O'Leary (1973) and Kent, Kanowitz, O'Leary and Cheiken (1977) have pointed out they do not necessarily perform in the same way as when they observe alone. In this study for teachers' verbal behaviour the primary observer was unaware which of the tapes he was analysing would be subject to observer agreement checks. In other investigations completed in classrooms, the primary observer is likely to know when the level of observer agreement check is being made by the presence of a second observer. This weakens the confidence that can be placed on such agreement.

In terms of accuracy the repeated independent playing of the tapes by the author and a research assistant followed by discussion allowed the development of accurate and robust definitions of all forms of feedback. These definitions proved successful in that the use of audiotape also allowed each feedback event to be identified via the cassette recorder counter.

The method used to observe pupil behaviour, the Pupil Behaviour Schedule; (Jolly and McNamara, 1992) had the advantage over other methods, e.g. OPTIC, (Merrett and Wheldall, 1987), of allowing continuous observations to be made of pupil behaviour over exactly the same time period as the teachers were being taped. The method used for pupil behaviour also allowed a more sophisticated analysis to be made of observer reliability than has been carried out by most if not all previously discussed investigators. A great many previous investigations appear to rely on calculating observer reliability simply by calculating inter observer agreement by the simple percentage formula: -

$$\text{Percentage Agreement} = \frac{\text{Smaller number of observations} \times 100}{\text{Larger number of observations recorded}}$$

As Harrop, Foulkes and Daniels (1989) state, this formula is simplistic in a number of respects. It makes the assumption that all the agreements and disagreements refer to the same events, which of course they may not. It does not take into account chance agreements. For a behaviour which occurs for a large proportion of the time, observed chance agreement will be high. Since 'on-task' is one such behaviour it is very important to ascertain the extent to which observer agreement is above chance level. As Harrop, Foulkes and Daniels point out in this type of research a more sophisticated method to calculate observer agreement using event agreement is to utilize Kappa (Cohen 1960). In this study the use of the Pupil Behaviour Schedule allowed each individual pupil

observation to be individually recorded and thus Kappa to be calculated so that it could be ascertained that the high level of observer agreement obtained were not a mere function of chance. This is in contrast to all of the previous studies to date e.g. Merrett and Wheldall (1987), who, because their method of recording pupil behaviour did not permit observer agreement to be calculated on the basis of whether the observers saw the same behaviour occurring at the same time, did not calculate Kappa so that they could not demonstrate the accuracy and reliability of their evidence to the same extent as is presented in this study.

In comparison with earlier studies the methodology used in this study utilises a high degree of both accuracy and reliability for both observations of teacher and pupil behaviour.

Other studies, i.e. Wheldall and Merrett (1986), White (1973) or Wyatt and Hawkins (1987), seem to use a mixture of Momentary Time Sampling (MTS) and/or Partial Interval Recording (PIR) without acknowledging the inherent error of the techniques see pages 38 and 39. Observer agreement is invariably calculated in terms of percentage of overall agreement, which is inherent in the techniques used i.e. Optic (Merrett and Wheldall 1987) or TAD used by White (1975) which do not allow individual events of pupil behaviour to be identified. Thus it is

impossible to calculate event agreement and difficult to check on agreements due to chance.

The Momentary Time Sampling used in this study to calculate pupil on-task behaviour is accurate for behaviours that occur at a high rate, as was the case in this study for on-task behaviour. Therefore we can conclude that an accurate picture of what actually occurred in the classroom was recorded. Further more Kappa was used to confirm overall agreement levels were well above that due to chance and also allowed analysis to be made on individual event agreement.

Compared with other studies the method used in this study to record teacher verbal behaviour was extremely robust. The use of audiotapes allowed agreement to be recorded only when the same verbal behaviours were noted at the same time on the tape. The likelihood of such agreements occurring by chance is negligible. In the event of any doubt the observer is free to replay the tape to check. This option is not available in other studies where the recording of teacher verbal behaviour takes place 'live'.

## **Definitions of approval and disapproval.**

The final definitions of approval and disapproval used in the investigation were as follows: -

### **Approval**

Any teacher response which indicated praise or satisfaction with the behaviour of one or more pupils. That included such comments as 'Excellent', 'Well done', 'Good girl/boy', 'Yes'. It also included the rather less effusive statement, 'That's right' or 'That's what I was looking for' and the repetition of a pupil's answer in a positive, neutral but non-querulous tone.

### **Disapproval**

Any teacher response to one or more pupils which was a rebuke or which indicated disapproval. Common examples included 'Stop that', 'Be Quiet', 'No, Pat', 'Now is not the time to be doing that'. This category included the teacher repeating a pupil's response in a querulous or questioning manner, together with comments implying negative consequences, e.g., 'I won't tell you again, and saying 'No' in response to an incorrect answer. It also included directions given with intonations implying teachers' intentions to reduce behaviours, e.g., ' Now I want you



to listen quietly', and teachers' use of questions to which there is no answer e.g., 'How many times do I have to tell you all to be quiet?'

### **Individual**

Any teacher response given to a single pupil following the pupil's behaviour.

### **Group**

Any teacher response given to more than one pupil following their behaviour, e.g., 'That's good Chris and Alex', 'You lot ought to sit still', 'That's what I like to see, a nice quiet class.'

### **Academic Behaviour**

These were the normal curriculum behaviours, reading, writing, listening, answering questions, i.e., performing prescribed activities.

### **Social Behaviours**

These were behaviours indicative of classroom manners, following class rules and routines, e.g., settling down to work quietly, remaining seated when appropriate, putting hands up to answer questions, lining up in an orderly manner when requested. They also included the converse behaviours of not settling down to work when asked, not working quietly, not remaining seated when appropriate, etc.

## **Description**

Teacher response which described the pupil behaviour for which approval or disapproval was given. For social behaviours this category is relatively obvious, so that as in the previous example, 'That's what I like to see, a nice quiet class', the behaviour of the group is described, as well as being given approval. For academic behaviour an approving or disapproving comment followed by description is also relatively obvious, e.g., 'Yes that was a quick calculation' (approval plus description), 'No you appear to have made a mistake in the units column', (disapproval followed by a description of the error). For academic behaviours in which the teacher repeats the pupil's response it was decided that if the correct answer was repeated and then commented upon, it would be categorised as approval with description, e.g., 'Sixty eight, yes that's right Val'. In like manner, an incorrect pupil response, which was repeated and then commented upon, was categorised as disapproval with description.

## **Redirection**

Teacher's response following disapproval which describes an approved behaviour, e.g., 'Don't do that Viv, I want you to work in silence.' For pupil answers to teachers' questions, redirection could take the form of rephrasing a question, e.g., 'No Sam, it isn't a simple addition; look more carefully at the wording of the question'.

A detail account of the definitions used by the observers appears in Appendix 4.

Each tape was scrutinised in turn. The procedure involved each tape being listened to on three separate occasions. On the first hearing the observer familiarised himself with the content of the lesson. On the second hearing a detailed record was taken of each incident of teacher verbal feedback and this was recorded on a record sheet. (See Appendix 4). The sheet allowed each incident to be classified in accordance with the definitions that had been developed, see above, and marked with the place on the tape when the incident took place. It was through this device that the accuracy of the observation could be compared. Once this detailed analysis was complete the tapes were listened to a third time when the accuracy of the record was check.

The advantage of using an audiotape recording of the teachers' verbal responses, was that if the observer was unclear over any aspect of what the teacher had said or was uncertain whether the response concorded with the description used of positive and negative feedback,- etc, then that section of the recording was simply replayed and any ambiguity resolved. This facet of the observational techniques that were employed allowed greater accuracy of observation than could have been

achieved using direct observation. However the major advantage was that by the recording of the teacher's verbal responses it allowed detailed observations of pupil behaviour to be contingent, in other words the behaviour of the pupils and the recording of the teachers' verbal feedback took place over exactly the same period of time. This contingency is of course not possible with other techniques such as OPTIC (Wheldall and Merrett, 1995), where the pupil behaviour is observed for ten minutes, followed by ten minutes recording of teachers' verbal behaviour. This contingency of observations of teacher and pupil behaviour is vitally important when comparing the relationship between the two variables.

Thus it was possible to record extremely accurately all types of teacher verbal feedback and calculate the rate at which these are given. In addition features of the quality of that feedback in terms of use of descriptions and redirections were recorded as well as the proportion of responses that teachers' direct to groups or individuals. Whether or not the teacher used the pupils' name was also recorded.

## **The Results**

The results of this study are presented in the following order:

- i) The proportion of types of feedback provided by teachers to their pupils.
- ii) The ratio of positive to negative feedback

- iii) The rates of different types of feedback between infant, junior and secondary school teachers.
- iv) The quality of feedback in terms of teachers use of descriptions, redirections, use of pupils names, and whether the feedback was directed towards groups or individuals.
- v) The behaviour of the pupils in the classes observed in terms of their on-task rates
- vi) The quality of pupil behaviour in terms of the type of off-task behaviour observed in lessons
- vii) The relationship between the teachers' use of verbal feedback and the behaviour of the pupils in their classes.

The teachers in the study varied a great deal to the extent they talked to the class. This talk included of course a great deal of actual teaching in terms of explanation and instruction. The analysis in this study was confined to looking at aspects of feedback for work and behaviour. Details of the rates of feedback is contained in table 10. In general terms however the average rate in all classes for positive feedback was over the rate of once every minute (1.2396 per min.) and the rate for negative feedback was under once a minute (0.7842 per min.). Taken together therefore on average pupils in the class observed were receiving some form of feedback twice every minute (2.0238 per min.)

**i) The percentages of positive and negative feedback directed by teachers to their pupils' academic work or social behaviour**

The percentages of different types of teacher feedback was calculated for the sample as a whole and then separately for teachers at Infant, Junior and Secondary level. The proportion for the sample as a whole is presented in table 6.

**Table 6**

**The percentage of types of feedback by all teachers (n = 50)**

	Academic	Behaviour	Total
Positive	57.30	3.85	61.15
Negative	10.85	28.62	39.47

This pattern of responses is similar to that reported by both Wheldall and Merret (1987) and Wheldall Houghton and Merrett (1989) in that the majority of feedback was of a positive nature and directed in response to pupils' work. Most negative feedback was directed towards pupils' behaviour and very little positive feedback was directed towards pupil behaviour. However direct comparisons with their samples at this point are difficult, as the age range in this sample encompassed pupils

aged 5 to 16, while the studies cited above were of separate primary and middle schools and secondary schools samples.

The percentages of different types of feedback given by teachers' at all three levels of education were calculated and are presented in table 7.

**Table 7**

**The percentage of different types of feedback given by Infant, Junior and Secondary teachers**

Types of Feedback	Infant N = 16	Junior N =16	Secondary N =18
Positive Academic	60.31	61.84	50.81
Positive Social Behaviour	4.09	4.69	2.91
Negative Academic	11.44	7.35	12.16
Negative Social Behaviour	22.86	22.91	36.23

The initial impression of this table is the similarity between the responses of the three types of teachers, especially the similar patterns of feedback given the infant and junior

Infant teachers in this sample tend to direct a marginally higher proportion (60%) of their feedback to positively acknowledging children's' work. This is a higher proportion than has been found in other studies e.g. Merrett and Wheldall (1987) who observed only 50% of this

type of feedback in their primary sample. However that study did not report observations of Infant classrooms separately so any direct comparison would be difficult.

The percentages of feedback recorded by Junior teachers are almost identical with the percentages of the Infant sample except perhaps that the junior teachers appear to use slightly more negative feedback directed towards behaviour than Infant teachers but slightly less directed towards their work. Thus overall their proportion of negative feedback is remarkable similar, junior teacher 33.26%, Infant teachers 34.3%.

Although the proportion of negative feedback or disapproval to behaviour and work was broadly very similar in both studies, the teachers in our sample appeared to be much more positive and less negative towards their pupils work than the Merrett and Wheldall (1987) study.

These differences may be a reflection of changes in teaching style in the period of time between the two studies, a reflection of the different methodologies used or as a result of the inclusion in the Merrett and Wheldall study of a group of teachers from classes of slightly older pupils.

Compared with the primary school sample secondary teachers appear to spend less time being positive about their pupils work, give very



little positive feedback directed towards behaviour and spend a higher proportion of their time telling them off.

A comparison with Wheldall Houghton and Merrett (1989) study which included only secondary school pupils shows a similar pattern and is presented in table 8.

**Table 8**

**Summary data from the Wheldall Houghton and Merrett (1989), percentages of different types of feedback by secondary school teachers**

	Academic	Behaviour	Total
Approval	45	10	55
Disapproval	15	30	45

Teachers included in this study tend to spend a higher proportion of their time in praising pupils for their work than the 1989, Wheldall Houghton and Merrett sample, 50.81% compared with 45%. They spent less time being positive about their behaviour, 2.91% compared with 10%, but a slightly higher proportion of time in disapproval 48.59% compared with 45%. However the differences such as they are, are not of major proportions. Indeed the variations between this study and that of Wheldall

et al are very similar to the variations between that study and the one conducted by Winter (1990) of the behaviour of secondary teachers in Hong Kong. He also found slightly higher proportions of both positive feedback to pupils' work and behaviour than this study.

**ii) The ratio of positive to negative feedback**

The ratio of positive to negative feedback, can be expressed both in terms of proportions of each type of feedback (table 9) and also in terms of a comparison of the different rates of each type of feedback (Table10)

**Table 9**

**The percentage of positive and negative feedback given by teachers in infant junior and secondary classrooms.**

	Positive	Negative	Ratio P/N
Infant N=16	64.4	35.6	1.809
Junior N=16	66.53	33.47	1.987
Secondary N-18	53.81	46.28	1.162

**Table 10**

**The overall rates per minute of positive and negative feedback given by teachers in infant, junior and secondary classrooms**

	Positive	Negative	T	Probability
Infant n=16	1.366	0.718	2.795	0.014
Junior n=16	1.128	0.647	3.967	0.001
Secondary n-18	1.086	0.964	0.410	0.687
Total n=50	1.2396	0.78428	3.199	0.002

These results are similar to those of Merrett and Wheldall (1987), Wheldall et al (1989) and Wyatt and Hawkins (1987); positive feedback rates were higher than negative feedback rates at each type of school. They are unlike those of the earlier investigations, before 1980, of White (1975) and of Rutter et al (1979). Although in this sample it was clear that secondary school teachers were less positive and more negative than their primary school colleagues and hence the difference between the two types of feedback was not found to be significant ( $t = 0.410$ , degree of freedom  $= 17$ ,  $p < 0.687$ ) for secondary teachers, although it was for the other two groups. This might appear to confirm the trend first described by White (1975) of teachers of older children being less positive. By comparison with the overall positive and negative rates shown by White (1975), however, the data in the tables show very large increases in overall rates of positive feedback at all three levels and relatively marginal changes in the overall rates of negative feedback rates. It seems evident; therefore, that it

is the very large increases in positive feedback rates, which have been largely responsible for the change, which has taken place since the early studies. Moreover, these results are relatively close to those British studies of Merrett and Wheldall (1987) and Wheldall et al (1989) and the Hong Kong study of winter (1990).

**iii) The rates of different types of positive and negative feedback by infant, junior and secondary teachers**

The rates of feedback directed towards pupils' work (academic) and social behaviour is outlined in Table 11

**Table 11**

**Mean rate, per minute, of positive and negative feedback, directed towards work and social behaviour by infant, junior and secondary teachers**

Feedback	Infant	Junior	Secondary
	n=16	n=16	n=18
Total	2.092	1.943	2.023
Total Positive	1.366	1.285	1.086
Positive (Academic)	1.262	1.201	1.029
Positive (Behaviour)	0.086	0.091	0.059
Total Negative	0.719	0.648	0.964
Negative (Academic)	0.239	0.143	0.246
Negative (Behaviour)	0.478	0.503	0.733

In general terms there would not appear to be major differences in the rates of feedback given by the teachers of pupils of different ages. This is especially the case when the rate of overall feedback is considered, see table 10. In other words teachers' at all three levels provide pupils with similar amounts of feedback. It is also clear that there are very close similarities between the rates of different types of feedback given by junior and infant teachers. Differences when they occur appear to be between secondary teachers and their infant and junior colleagues in primary schools. For example the rates for all types positive feedback of infant and junior teachers are remarkably similar, while they are uniformly lower for secondary teachers. Similarly the overall rates of negative feedback and negative feedback for behaviour are show great similarity between infant and junior teachers, while the rates for secondary teachers are much higher.

#### Positive Feedback

In agreement with other investigations the data show that overall teachers gave higher rates of positive feedback for academic behaviour than for social behaviour ( $t = 11.702$ , degree of freedom = 49,  $p < .000$ ). In fact significant differences were found in all three types of classroom; Infants ( $t = 5.963$ ,  $p < 0.000$ ), Juniors ( $t = 9.067$   $p < 0.000$ ) and Secondary ( $t = 6.161$ ,  $p < 0.000$ ). This aspect of the results of this investigation

therefore serves to confirm the findings of all previous studies from White (1975) to Charlton et al (1995).

That academic behaviour received very much higher rates of positive feedback than social behaviour would seem to suggest that the majority of teachers saw a need to encourage good work and work habits by praise or acknowledgement; the same was not true of their response to social behaviour. In fact as White pointed out in her samples praise for what she called 'managerial behaviour' was sparse to the point of non-existence. The same was almost true in our sample. Rates for the three levels were Infant 0.086 per minute, Juniors 0.091 per minute (about once ever 9 to 12 minutes of teaching). The secondary rate of 0.059 would suggest that the average pupil would have to wait almost double that time to hear a positive remark about a fellow pupil's behaviour. In fact of the classes observed no positive feedback directed specifically towards behaviour was recorded in five infant classes, four junior classes and no fewer than ten secondary classes, that is over 55% of the secondary school sample.

#### Negative feedback

The pattern of negative feedback was in broad terms the mirror image of the pattern of positive feedback. There were higher rates for negative feedback directed at social behaviour than the pupils' academic

work. ( $t = 3.637$ ,  $p < 0.001$ ). However these differences were not apparent for all groups of teachers.

The negative feedback of the primary teachers showed a significant difference in that directed towards work and behaviour; infants ( $t = -2.201$   $p < 0.044$ ), juniors ( $t = -4.767$   $p < 0.001$ ), however the differences were not significant for secondary teachers ( $t = 1.893$ ,  $p < 0.075$ ) It was also true that the rate of negative feedback from secondary teachers was higher than their primary colleagues for both work and behaviour, but not statistical significantly so. This pattern was similar to all other studies. Bearing in mind previous research which has demonstrated the ineffective value of disapproval i.e. Madsen et al (1968), this finding is not encouraging, particularly as it is a finding that has been confirmed many times in the past. It would appear that on the whole teachers appear to be adopting a very reactive style to pupils' social behaviour; they see a pupil failing to do as they are told and respond with an admonishment. On the other hand it is clear that a similar pattern does not seem to apply in response to their work, where there is evidence of a very positive approach.

If one considers the rates of positive and negative feedback together, the picture on the whole is encouraging. Most teachers appear to take a positive approach with the classes they teach. More positive

feedback is given for work than behaviour and more positive feedback is given than negative. The fact that most positive feedback is given to work is itself of value since it should be borne in mind that there is good, long-standing previous research, quoted by Klein (1979), that giving approval to academic behaviour tends to improve both academic and social behaviour, whilst the reverse does not always occur.

**iv) Teachers' feedback containing descriptions.**

Careful analysis of each tape allowed a record to be made of whether teachers at all three levels included descriptions of pupils' behaviour in both their positive and negative feedback, e.g.,

'Well done Tommy, you've tidied up your table really well!'

Descriptions were recorded for all instances of both positive and negative feedback, see table 12

**Table 12**

**Rate of positive teacher feedback of per minute, containing a description of behaviour.**

Level	Rate of Feedback	Rate of Feedback With Description	Percentage of Feedback with Description
Infant N=16	1.366	0.606	44.36%
Junior N=16	1.285	0.421	32.76%
Secondary N=18	1.087	0.527	48.48%
Overall N=50	1.246	0.492	39.47%



There was some variation between the levels in the proportion of positive feedback, which included a description. Secondary and infant teachers had very similar rates. Almost half of positive feedback contained a description at secondary level, while only a third of such feedback from junior teachers was descriptive. It is difficult to give an explanation for these variations. Wyatt and Hawkins (1987) reported that in their study teachers of younger pupils used description more frequently than did teachers of older pupils. This certainly is not the case in this sample where rates are highest for teachers of the eldest pupils.

**Table 13**

**Rates of Negative Feedback (per minute) containing a description**

Level	Rate of Feedback	Rate of Feedback with description	Percentage of Feedback with Description
Infant N=16	0.719	0.498	69.26%
Junior N=16	0.648	0.341	52.70%
Secondary N=18	0.964	0.259	26.86%
Overall N=50	0.777	0.354	45.55%

In the case of teachers' use of negative feedback a different pattern is apparent. The teachers of the youngest pupils provide a description of behaviour in almost three-quarters of the feedback they give. This proportion falls consistently for pupils of older pupils. This is exactly the same pattern described by Wyatt and Hawkin (1987) in their study. This

trend was analysed by Jonckheere's trend test but found to be significant at only the 10% level ( $z = 1.431$ ,  $p = 0.076$ ). Bearing in mind the majority of this negative feedback is directed towards pupils' behaviour it would appear that teachers' of the youngest children feel it is necessary to give explanations to their pupils so that they can learn to distinguish between approved and non-approved behaviour, while teachers at secondary might well have felt that their pupils ought to know what is acceptable and unacceptable and thus did not feel the need for further explanations

**v) The use of pupils' names when giving feedback**

The tapes were also analysed to ascertain the extent to which teachers used pupils' own name when providing feedback. This is an area, which does not appear to have been investigated to any degree in school classrooms although it has been studied in other settings i.e. Garrity and Degelman (1990) in a restaurant. The results show little variation between teachers of different aged pupils in the proportion of named positive feedback but greater differences are apparent when negative feedback is considered, as table 14 and 15 show.

**Table 14**

**The rate and proportion of positive feedback that includes the pupils' name**

Level	Rate of positive feedback	Rate of positive Feedback including name	Proportion of feedback including name
Infant N = 16	1.366	0.1343	9.83%
Junior N = 16	1.285	0.1312	10.21%
Secondary N = 18	1.087	0.0739	5.93%
Overall N = 50	1.246	0.1116	8.96%

The proportion of named positive feedback for all groups appears low. The rate of this type of feedback appears very similar for infant and junior schoolteachers. Secondary teachers appear to use this type of named feedback when giving positive feedback very sparingly indeed, at almost half the rate of their primary colleagues. With negative feedback, however, a different picture emerges as table 15 shows.

**Table 15**

**The rate and proportion of negative feedback that includes the pupils' name**

Level	Rate of Negative Feedback	Rate of negative feedback with name	Proportion of negative feedback with name
Infant N = 16	0.719	0.295	41.03%
Junior N = 16	0.648	0.313	48.30%
Secondary N = 18	0.964	0.245	25.42%
Overall N = 50	0.777	0.283	36.42%

It would appear that all teachers use the name of the pupil when giving negative feedback at a rate almost exactly four times more often than when using positive feedback. Moreover it is clear that there is a contrast between the proportion of this type of feedback given by primary teachers and that given by secondary teachers. Primary teachers appear to direct their negative feedback to named individuals and therefore be more targeted in their feedback. Secondary teachers are again seen to be sparing with their use of pupils' names and only use the pupils' name in a quarter of this type of feedback. The differences between rates of positive and negative feedback is shown in table 16

**Table 16**

**The difference between the rates of positive and negative named feedback in Infant Junior and Secondary Teachers**

Level	Rate positive with name	Rate negative with name	T	Df	Probability
Infant N =16	0.134	0.295	-2.352	15	0.033
Junior N = 16	0.131	0.313	-2.118	15	0.051
Secondary N =18	0.074	0.245	-3.318	17	0.004
Overall N = 50	0.112	0.283	-4.402	49	0.000

There is a significant difference in teachers' use of pupil's name when giving positive and negative feedback. This difference is more

pronounced in the secondary sample than for the primary school sample but it appears to be a very consistent finding.

**vi) Feedback directed towards individuals and groups**

Analysis of the tapes also allowed a record to be made of whether teachers' feedback was directed towards individual pupils or towards groups. The size of groups varied from two, i.e. 'be quiet you two boys at the back!', to the whole class, i.e. 'well done class for lining up well.' Overall the majority of feedback 85.89% was directed to individuals and only 14.11% directed to groups, (see Table 19).

As far as feedback to individuals is concerned both in terms of the rate and proportion positive individual feedback was double that of negative individual feedback. On the other hand teachers seem to use group feedback more predominately to provide their pupils with negative feedback. The actual rates and proportions of the different types of feedback are presented in tables 17 and 18

**Table 17**

**The rate of positive and negative feedback directed towards groups and individual pupils**

School	Individual		Group	
	Positive	Negative	Positive	Negative
Infant N =16	1.183	0.516	0.123	0.183
Junior N =16	1.308	0.354	0.096	0.177
Secondary N = 18	0.989	0.535	0.067	0.189
Overall N = 50	1.153	0.535	0.094	0.183

**Table 18**

**The percentages of positive and negative feedback directed groups and individual pupils**

School	Individual		Groups	
	Positive	Negative	Positive	Negative
Infant N =16	58.9	25.7	6.13	9.14
Junior N =16	67.7	18.12	4.96	9.16
Secondary N = 18	50.42	36.54	3.39	9.63
Overall N =50	58.66	27.23	4.78	9.33

It is apparent from both tables 18 and 19 that there was a remarkable similarity between rates of the various types of feedback given by teachers of different aged pupils.. This was most apparent when comparing the proportions of feedback. This was especially the case when

considering proportions of negative feedback directed towards groups, which are all within point five of one percent of each other.

**vii) Negative feedback containing a redirection**

Analysis of the tape also allowed a record to be made of the rate at which teachers included a redirection in any negative feedback that they provided to their pupils. The rate and proportions are recorded in Table 19

**Table 19**

**The rate and percentage of negative feedback that included a redirection**

School	Rate of negative feedback	Rate of negative feedback including redirection	Percentage of feedback including redirection
Infant N = 16	0.719	0.260	36.16
Junior N = 16	0.648	0.158	24.38
Secondary N = 16	0.964	0.269	27.90
Overall N = 50	0.777	0.225	28.95

There would appear to be an only small difference the percentage of redirection used by junior and secondary teachers at around a quarter of all negative feedback containing a redirection. Infant teachers use redirection in over a third of their negative feedback. This difference

between infant and other teachers was also found in terms of teachers' use of descriptions. This is further evidence to suggest that it is possible that the teachers of these younger do not presume that their pupils know what is expected of them and are therefore more likely to provide them with the extra element of direction.

### **On-Task Behaviour of the Pupils**

The on-task behaviour of the pupils in all classes in this study was measured using the Pupil Behavioural Schedule (Jolly and McNamara 1992). The inter-observer agreement in this study was high at 92.89% with a Kappa of 0.75, (see page 58). The reliability of the measured rates of pupil on-task behaviour was therefore considerable. The rates for all classes and for each type of school are recorded in Table 20.

**Table 20**

**The percentage of on-task behaviour for infant, junior and secondary school classes**

Type of school	Mean	Standard Deviation	Range
Infant N=16	81.24	7.447	66.66 – 92.50
Junior N = 16	78.47	13.559	41.00 – 95.70
Secondary N=18	81.58	13.107	59.10 – 96.90
Total N = 50	80.48	11.611	41.00 – 96.90



The results show a remarkable similarity between the classes at the different types of school. It is clear that in this study there is no substantial difference between the levels of on-task behaviour and pupils of different ages.

Comparison between this study and others is difficult because as has been pointed out earlier the method of calculating on-task behaviour has varied between different studies. However these results show a remarkable similarity with some of the other studies carried out in England with secondary aged pupils, see Table 21. Differences however are apparent between this sample and those of Merrett and Wheldall (1987), close scrutiny of their data allows on-task rates for their infant and junior sample to be made. This reveals infant rates of 65.9% and for their junior sample of 69.68%.

**Table 21**

**The rate of on-task behaviour reported in other Studies**

Study	Age Range	On-task percentage
Rutter (1975)	Secondary	81.5
Wheldall, Houghton & Merrett (1989)	Secondary	80.5
Merrett & Whedall (1987)	Primary & Middle	69.7

## Types of off-task behaviour

One of the advantages of the Pupil Behaviour Schedule used in this study is that in addition to calculating the rate of pupil on-task behaviour it allowed a record to be made of the different types of off-task behaviour of each pupil. These are displayed in table 22.

**Table 22**

**The measured percentage of different types of off-task behaviour for infant, junior and secondary aged pupils.**

Types of off-task behaviour	Infant N = 16	Junior N = 16	Secondary N = 18	Overall N = 50
In-seat	2.450	2.308	0.874	1.837
Out of seat	4.845	5.468	1.537	3.853
Shouting	0.101	0.084	0.220	0.139
Talking	5.662	5.834	8.572	6.765
Disturbing other pupils	0.296	0.289	0.825	0.484
Arguing	0.03	0	0	0.009
Distracting teacher	0.370	0	0.652	0.353
Inattentive	6.396	6.184	5.339	5.948

Although there would appear to be some variation between the off-task behaviour of pupils from different types of classes, these differences appear to be quite small in most cases. The only two exceptions are in the case of 'out of seat' behaviour, which appears to account for around 5% of off-task behaviour of infant and junior pupils but only 1.5% of that of secondary pupils and 'disturbing other pupils, which in secondary classes

appears to occur almost three times more often than in primary classes. In all other respects there appears to be a relatively similarity between the type of behaviour recorded by pupils at all levels. This similarity is despite the considerable variation in the types of lessons observed, from Year 11, preparing for their GCSEs to a group of five-year-olds just starting school.

Talking and inattention were observed in all classes. Behaviour such as shouting out that disrupted the whole class was observed on only seven occasions. Only one example of arguing with the teacher was recorded.

Although other research has not been published using this schedule, these results are not dissimilar from those of Rutter et al (1979) who found that it was low level talking between pupils rather than major disruptive incidents that were typical of the average class. Similarly, surveys of teachers i.e. Gray and Sime (1990) seem to suggest that it is low level disruptive behaviour such as, talking out of turn or being inattentive, that are the most frequent type of disruption to lessons.

## The relationship between teacher verbal feedback and the behaviour of pupils.

The relationship between teacher verbal feedback and pupil behaviour was one of the key elements of this enquiry. This relation has been examined in terms of correlations between these two factors. The relationship between overall rates of feedback is examined as is the relationship between different types of feedback with on-task behaviour. In terms of examining the effect that different types of feedback may have on pupil behaviour it must be remembered that the majority of positive feedback was directed towards pupils' work, one must presume in an attempt to encourage such endeavour. On the other hand the vast majority of negative feedback was directed to pupils' behaviour one must presume in an attempt to reduce the behaviour.

Very little positive feedback is directed towards pupils' behaviour.

**Table 23**

**Correlations (Pearson's R) between types of teacher verbal feedback and pupil on-task behaviour. N = 50**

Types of Feedback	Pearson R	Probability
Total Positive	.312	.027*
Academic Positive	.339	.016*
Behaviour Positive	-.219	.126
Total Negative	-.463	.001**
Academic negative	.082	.571
Behaviour negative	-.493	.000**
Total Feedback	-.104	.471

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

These results were on the whole in the expected direction. Positive feedback from teachers tends to be positively correlated to pupils' on-task behaviour, while negative feedback tends to be negatively correlated to on-task behaviour. The fact that there were smaller and insignificant correlations between positive feedback for behaviour and on-task behaviour and negative feedback concerning pupils' work and pupils' on-task is possibly a reflection of the small amounts of this type of feedback given by teachers. It would appear therefore that the key variables are the total amount of positive feedback of which the vast majority is made up of positive remarks made about pupils' work and total rate of negative feedback mainly directed towards pupils behaviour. Since the data above is likely to include variations between the different types of school, it was felt that further analysis of teacher feedback should be made on the basis of total rate of positive feedback and total rate of negative feedback. The rate of both types of feedback and their relationship to pupils' on-task behaviour was examined by use of a scattergrams at each of the three types of school

The correlations between positive feedback and pupil on-task behaviour for the pupils at each type of school is presented in Table

24

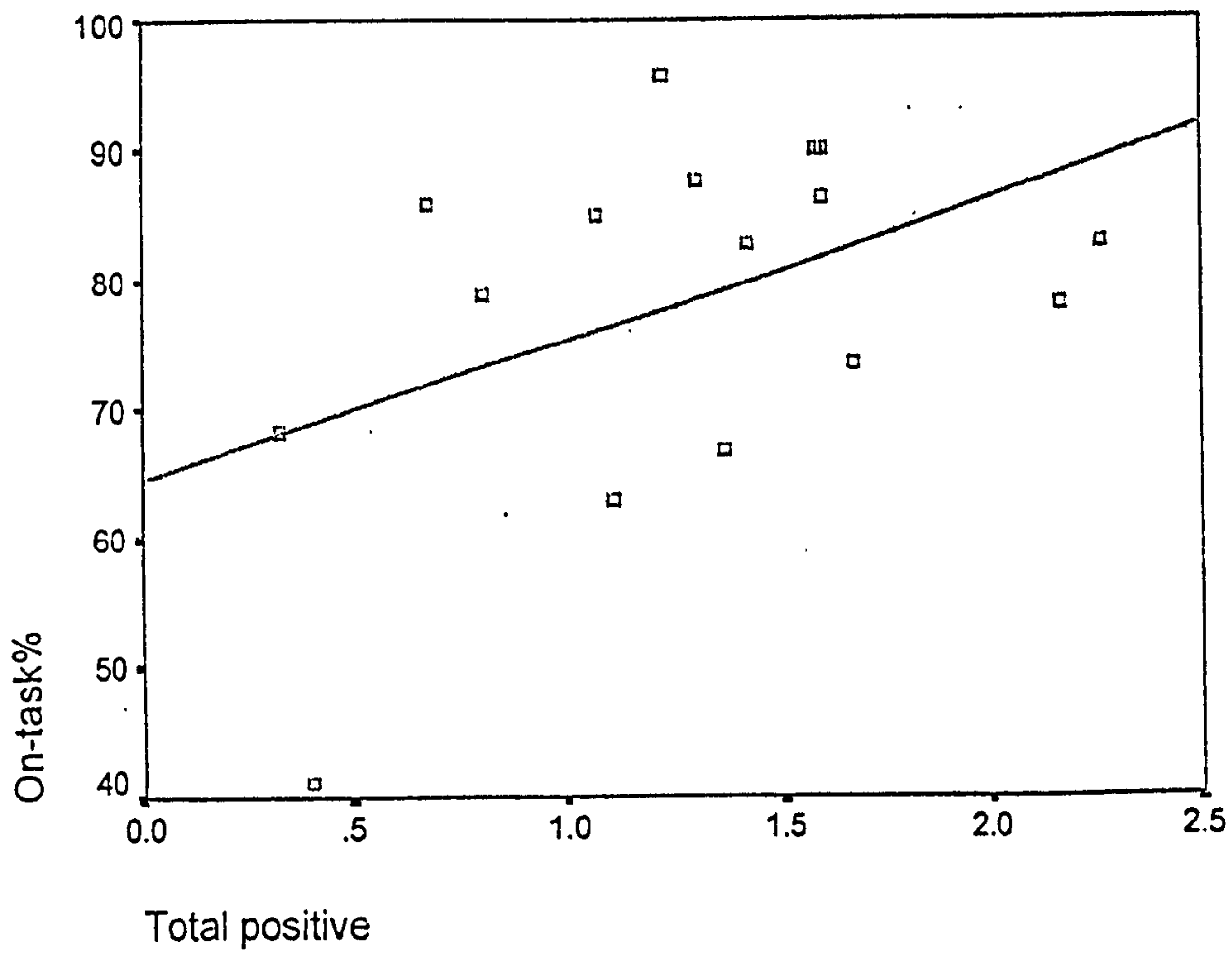
**Table 24**

**The correlation between the on-task behaviour of pupils in Infant, Junior and secondary schools and the positive verbal feedback of their teachers**

Type of school	Correlation, Pearson's R	Probability
Infant N=16	0.361	0.170
Junior N=16	0.422	0.087
Secondary N=18	0.288	0.246

These correlations vary between the different types of school however significance levels are less likely because of the smaller sample size compared with those in table 24. These correlations would also appear to be lower than that reported in other studies of secondary classrooms i.e. Thomas et al (1978) of +0.40 or Winter (1990) of +0.40 or Wheldall Houghton and Merrett (1987) of +0.44. They were more similar however to the Nafpaktitis et al. (1985) secondary study, which found a correlation of +0.21 or the primary study of Merrett and Wheldall (1987) which found +0.10. However they are consistent in that higher levels of pupil on-task behaviour appear to be associated with higher levels of positive verbal feedback teacher. Represented graphically they appear very similar to the junior example presented below in figure 1

Figure 1 A graph of the relationship between On-task behaviour of junior pupils and teachers' positive verbal feedback.



The picture is very different when considering negative feedback by teachers. In terms of correlations the pattern is presented Table 25

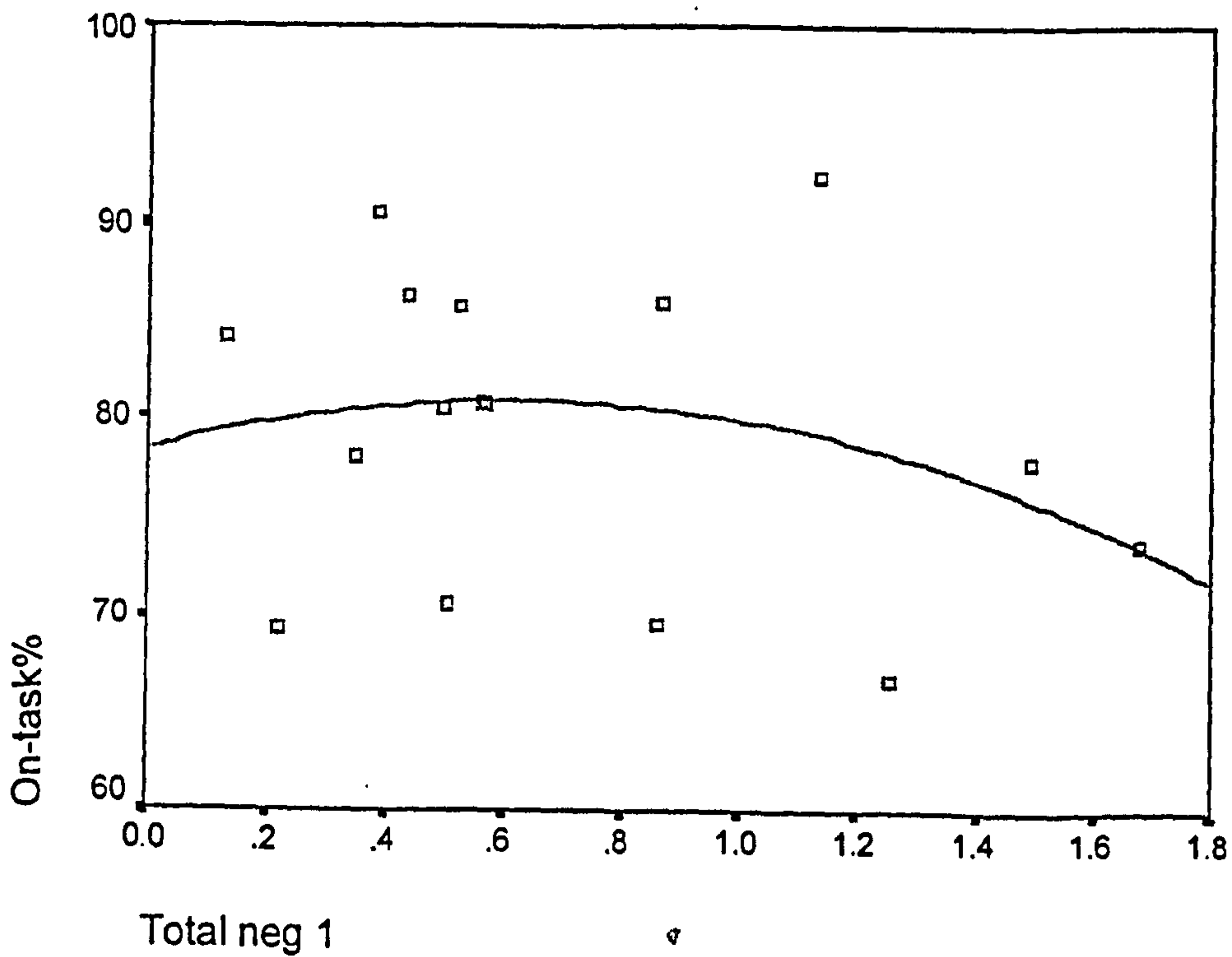
**Table 25. The correlation between the on-task behaviour of pupils in Infant, Junior and Secondary schools and the negative verbal feedback of their teachers.**

Type of School	Correlation, Pearson's R	Level of Significance
Infant	-0.213	0.429
Junior	-0.325	0.220
Secondary	-0.689**	0.002

\*\* Level of significance at the 0.01 level (2-tailed)

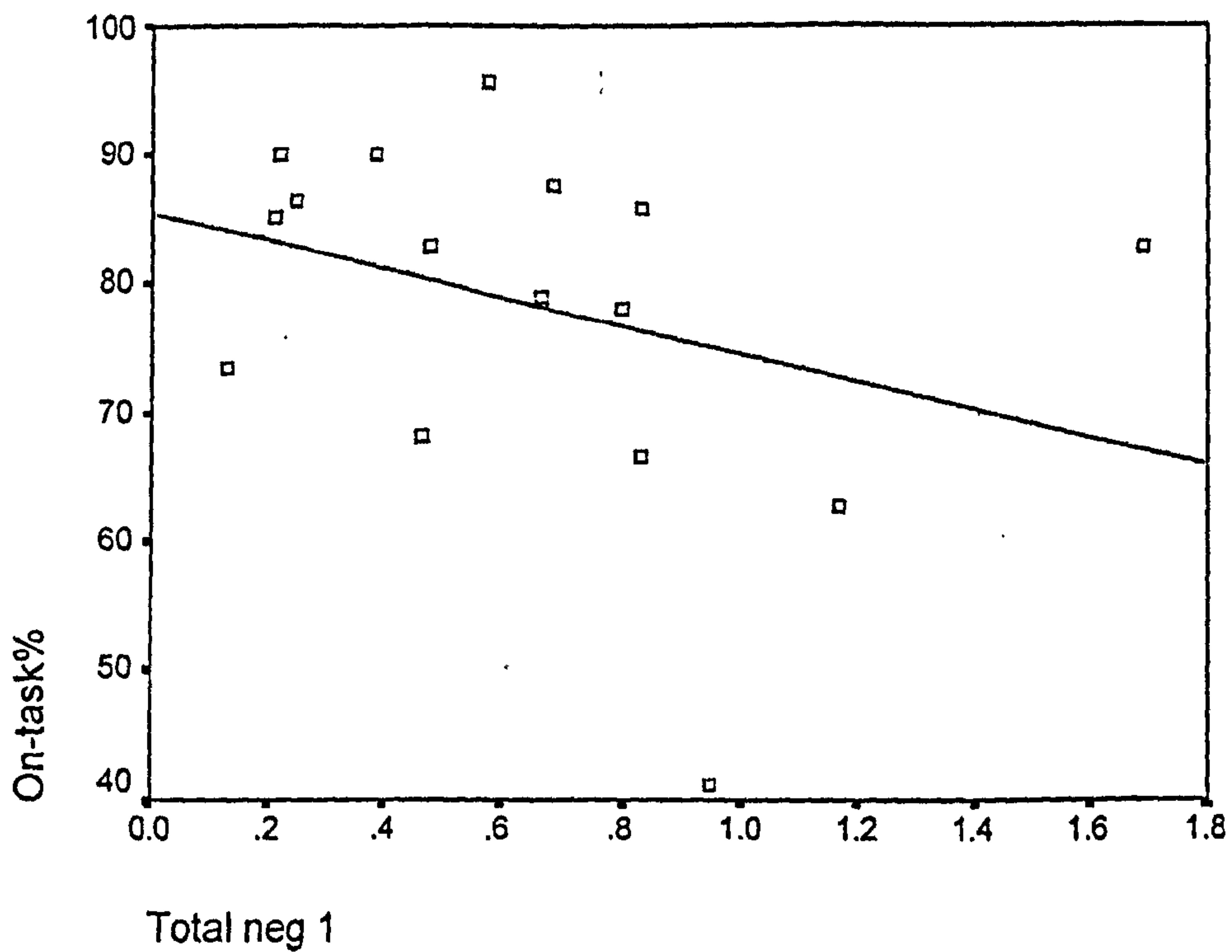
The difference between the teachers' use of verbal feedback is very apparent when these are presented graphically in figure 2.

**Figure 2 A graph of the relationship between on-task behaviour of infant pupils and negative teacher feedback**

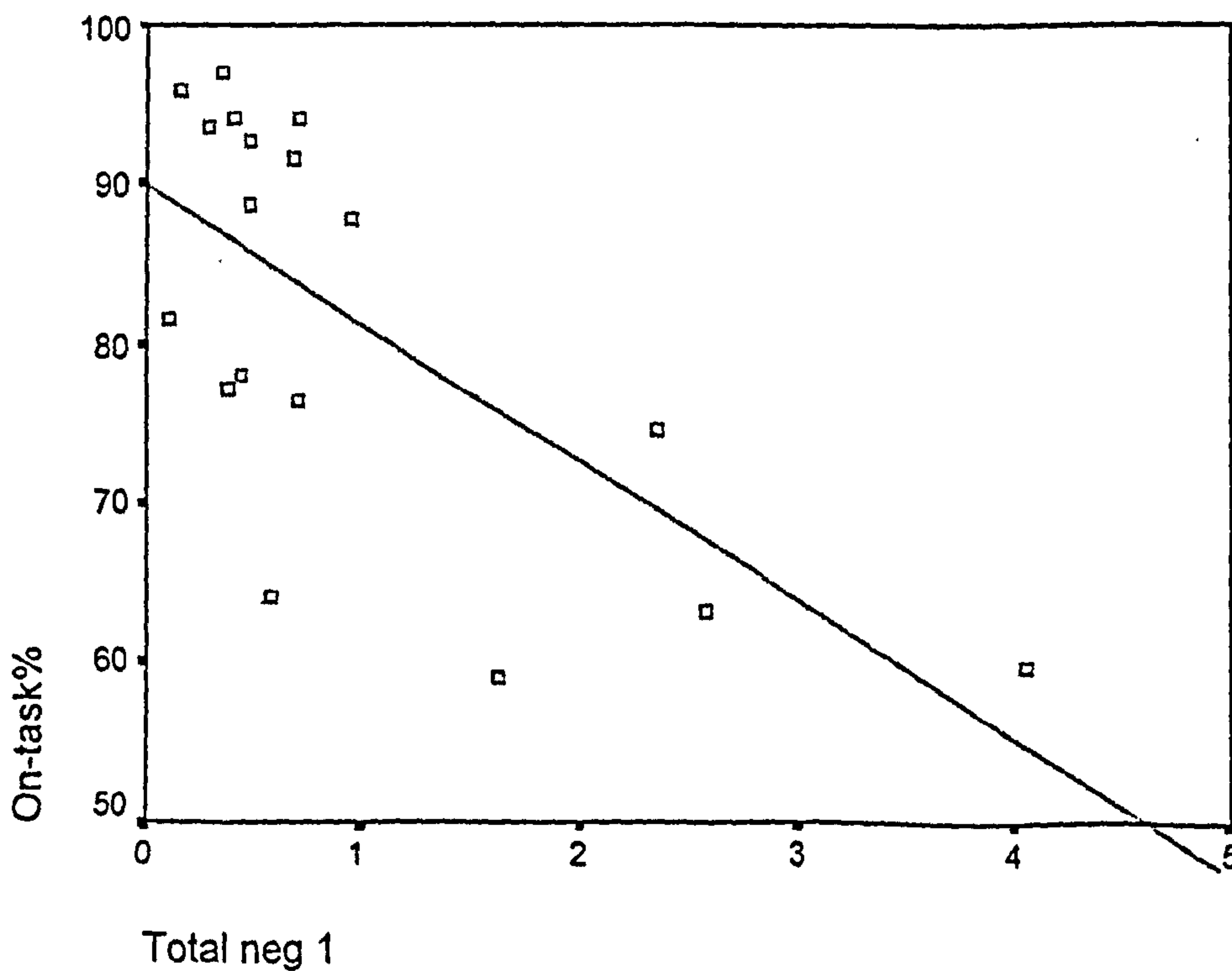




**Figure 3** A graph of the relationship between the on-task behaviour of junior pupils and teacher negative feedback



**Figure 4** A graph of the relationship between the on-task behaviour of secondary pupils and teacher negative feedback.



It is apparent that three different patterns of teachers' use of negative feedback emerge. The pattern of Infant teachers' use of negative feedback suggests there might be a curvilinear relationship between negative feedback and on-task behaviour. The higher rates of on-task behaviour is associated with mid-range levels of disapproval, while lower rates of on-task behaviour are associated with both low and high levels of disapproval. It should also be remembered that there was a noticeable difference between Infant teachers in their use of negative feedback and the two other groups of teachers. Infant teachers used far more description when giving negative feedback, almost 70%, compared with junior teachers at just over 50% and secondary teachers at around 25%, (see table 14, page 99). In addition infant teachers included a higher proportion of redirection following negative feedback, 36%, than the other teachers, juniors 24%, secondary 27%. The fact that the inverted 'U' shape is not apparent in the other samples may indicate that different factors may be at work. Certainly the fact that the majority of negative feedback includes a description must be important. The majority of infant pupils in the study are told why they are being admonished and hence it could be argued have a better idea of what they should be doing and also of course over a third of the sample (36%) are actually redirected by the teachers. It is therefore reasonable to deduce that it is this aspect of the quality of negative feedback that can account for at least some of the inverted 'U' effect at least when negative feedback is being given at low rates. Conversely it

also appears that infants like all other children do not appear to respond to high rates of negative feedback.

The inverted 'U' pattern of the graph was investigated further by use of the split half correlation, see Barlow and Hersen (1984). This allowed a comparison to be made of the ascending and descending halves of the graph. This showed a positive correlation for the first half,  $r = 0.116$ , reflecting the ascending slope of the graph and a negative correlation of  $r = -0.247$  reflecting the descending half of the graph. However further analysis showed the difference between the two halves to be small and therefore not statistically significant ( $t = 0.0953$  at  $df = 12$ ).

In contrast the pattern of secondary teachers (figure 4) is very different indeed. Here there was a strong statistically significant negative correlation between teachers' rates of disapproval and on-task behaviour. In classes with high rates of on-task behaviour the rates of negative feedback were very low. Where on-task rates were low then rates of teacher negative feedback were very high indeed, almost double the rate observed in both infant and junior classes.

It is tempting to suggest that the pattern of junior teacher's use of negative feedback is somewhere between the contrasting styles of their infant and secondary colleagues. A negative correlation of  $-0.325$  shows a similar trend to the secondary teacher's sample. However there

were some indications in the graph that a similar pattern to the infant teachers' was also apparent i.e. in the class with the highest on-task behaviour (95%) the rate of negative feedback was 0.6 a minute, where two other classes with on-task rates of only 72% and 83% showed rates of negative feedback as low as 0.2 and as high as 1.65 respectively.

### **The effect of the ratio of positive to negative feedback on pupil behaviour**

Wheldall, Houghton, Merrett and Braddeley (1989) suggest that one way to assess the overall effect of both positive and negative teacher feedback is to express it in the form of a ratio; positive feedback divided by negative feedback. They argue that the advantage of treating the data in this way is that it can provide an insight into the overall effect of the balance of both types of verbal feedback, positive and negative, has on pupil behaviour. That is true, however by treating data in this way can mask the effect of rate of feedback. For example the positive to negative ratio of two teachers could both be calculated at 2.5, but their recorded rates of feedback could be very different i.e.

Teacher A +ve = 5, -ve = 2, Ratio = 2.5

Teacher B +ve = 0.5, -ve = 0.2 Ratio = 2.5

Thus by using ratio any effect of the rate of feedback is lost. The results of the analysis using this approach are recorded in Table 26 so that an overall impression of the dual effect of both types of feedback can be

made and so that a comparison can be made between the results of this study and that of Wheldall et al (1989)

**Table 26**

**The correlation between the ratio of teachers' positive and negative feedback and pupils on-task behaviour.**

Type of School	Ratio +ve/-ve	Percentage of Pupil on-task Behaviour	Pearson's r Correlation
Infant N = 16	1.899	81.24	0.560*
Junior N=16	1.983	78.47	0.507*
Secondary N=18	1.127	81.58	0.545*
Total N = 50	1.669	80.48	0.422**

\*Correlation is significant at the 0.05 level (2-tailed)

\*\* Correlation is significant at the 0.01 level (2-tailed)

These results were in the direction predicted. There was a tendency for classes in which teachers provided a higher proportion of positive feedback in relation to their negative feedback to record higher rates of pupil on-task behaviour. This trend is in line with other reported accounts i.e. Wheldall et al (1989) who have also used a ratio to express the overall nature of teacher feedback.

This analysis is provided to illustrate the combined effect of both positive and negative feedback on on-task behaviour. However as has been outlined above this treatment of the data means that any effect due to the rate of feedback is lost. What is gained however appears to be some effect due to the combination of both forms of feedback. This may explain

why the correlation between ratio and on-task behaviour is larger than that between rates of positive feedback alone and on-task behaviour both infant, junior and secondary samples. The correlation between ratio and on-task behaviour is higher than correlations between negative feedback rates and on-task behaviour for infant and junior samples, but not for the secondary sample. The reason for this phenomenon is not clear, but may be related to the fact that in secondary classrooms the actual rate of negative feedback is higher than for the infant and junior sample and therefore at those rates the single variable is stronger than the combine variable.

## Summary of results

The results of this study which was essentially an observational study of teachers' use of verbal feedback, the behaviour of their pupils and an attempt to examine the relationship between those two variables found:

1) The proportions of verbal feedback directed towards pupils work and behaviour were similar to those found in other studies in that the majority of positive feedback was directed towards pupils' work while the majority of negative feedback was directed towards pupils' behaviour.

Very little positive feedback was directed towards pupils' behaviour. This pattern was found in Infant, Junior and Secondary classes

2) More positive than negative feedback was apparent at all three levels of schooling. The ratio was smaller in secondary level.

3) The rates at which teachers give feedback seemed very similar across all levels of schooling.

4) The rate at which teachers' use of descriptions when providing positive feedback seems very similar across the three levels of schooling. There would appear however to be differences when considering negative feedback. The proportion of negative feedback containing a description was approximately 70% for Infants, 50% for Juniors and only 25% for Secondary teachers.

5) Teachers' use of pupils' names when providing feedback also varied, infant and junior school teachers used the pupils' name in approximately 10% of positive feedback and 45% of negative

feedback for secondary teachers the figures were 6% and 25% respectively.

- 6) Redirections following negative feedback tended to be used more by infant teachers, 36%, whilst in junior and secondary classes the proportion was 24% and 28% respectively.
- 7) The majority of verbal feedback was directed to individual pupils (86%) rather than to groups... The rate of positive individual feedback was twice the rate of individual negative feedback. This was the reverse of the rates for group feedback, where the rate of negative feedback was twice that for positive feedback.
- 8) High rates of teacher positive feedback tended to be associated with high rates of pupil on-task behaviour and conversely high rates of teacher negative feedback tended to be associated with low rates of pupil on-task behaviour.



## Discussion

This study links in with a sequence of investigations that have extended over the past thirty years. Interest in this area of inquiry has continued presumably because it has been felt that teacher feedback was, is and will continue to be a very important element of good teaching.

The previous investigations with which the results of this study have been compared differ from one another in a number of methodological ways. These differences include the number of teachers observed, the method of observation, the definitions of behaviour observed, the conditions under which observer agreement was calculated and of course the school system and country (USA, Britain, New Zealand, Hong Kong, Australia and even St. Helena). What they all have in common was that they were all concerned with observing teacher approval and disapproval but unlike this investigation they were unable to keep a permanent record of teacher verbal behaviour.

Despite these differences in methodology between this study and earlier ones, investigations from the mid 1970s to the late 1980s showed certain consistencies in their results and one important change. What remained consistent was that approval was seen to have been given primarily for academic behaviour and disapproval for social behaviour and that both approval and disapproval rates seem to decline as the age of the

pupils increases. The only factor that seems to have changed between the initial studies of White (1975) and later studies is that observed approval rates moved from being lower to being higher than disapproval rates.

This investigation followed a decade later from those of Merrett and Wheldall (1987), Wyatt and Hawkins (1987) and Wheldall et al (1989), albeit using a different methodology, the most obvious of which was the use of a radio microphone to make a permanent record of the teachers' talk. The extent, to which this method of recording as opposed to using classroom observers is likely to have produced different behaviours from teachers, is open to question. Nevertheless, there are again consistencies in the results when they are compared with the previous investigations. As in all the previous investigations, approval is seen to be given primarily to academic rather than social behaviours, with the reverse being the case for disapproval. Such a finding transcending time, methodology and school system can be said to be an established feature of observed teacher behaviour. It should also be noted that although the results for the secondary teachers did fit the overall pattern, when the ratio of positive to negative feedback is considered, the balance of positive to negative feedback is smaller in their classes than in classes of younger pupils, (see table 11 page93). Thus it appears that the effect first noted by White (1975) of secondary teachers' rate of positive feedback being at a lower rate than teachers of younger children is still apparent. Unlike White

(1975) but like almost all subsequent studies the main finding of approval rates being higher than rates of negative feedback seems to be confirmed and thus can be regarded as extremely robust. Thus the change, which was noted in the late 1980s, seems to have been maintained into the late 1990s.

When we consider the use of description following approval and disapproval there were some differences found between the results of this investigation and that of Wyatt and Hawkins (1987). They found that a description of behaviour was included with approval in the majority of infant sample and indeed their sample of secondary teachers but not for the junior teachers. In this study the proportion of positive feedback containing a description was below half for all types of teacher. As far as negative feedback is concerned Wyatt and Hawkins found that the majority contained a description whereas in this study this was only found to be the case for primary teachers but not the secondary teachers. This apparent difference between this study and Wyatt and Hawkins work may be a reflection of the number of teachers observed at each type of school Wyatt and Hawkins observed only ten secondary teachers, half of which were at 'sixth form level. This study showed a consistent proportion of only around 40% of approval included a description across all age levels. In the case of disapproval, Wyatt and Hawkins found the majority of disapproval included a description at all three levels, while this study found considerable variation between infant and junior teachers who

included a description in 69% and 53% respectively, while for secondary teachers the figure was only 27%. This trend was only found to be significant at the 10% level. It is possible that differences in methodology and/or in definitions of approval and disapproval could have influenced the overall finding, which could have been amplified by the method they used to record behaviour; however such differences are unlikely to have influenced the findings between the levels. The only other source of differences could be due to the different teaching styles and practice between the USA and British teachers.

It is apparent in this study that there were differences in the approach of primary and secondary teachers in their use of descriptions following negative feedback. It would appear that in this British sample of infant and junior teachers, they feel the need to explain to their pupils the reason they are being admonished for inappropriate behaviour in terms of their lack of knowledge as to how they are supposed to behave.

Conversely one can only assume that secondary teachers do not feel the same need, as they may well assume that their pupils already know why they are being 'told off'. However this same logic does not apply to teachers' use of descriptions following approval, where all types of British teachers seem to assume either that their pupils know why they have been praised or perhaps alternatively that simple praise is all their pupils need.

This investigation looked at three additional features of teacher verbal feedback which appear not to have been investigated in any great depth in classrooms in any other study, teachers use of pupils' names, whether verbal feedback was directed towards individuals or groups and third teachers use of re-direction following disapproval.

The data show that teachers at all levels used pupils names far more frequently when providing their pupils with negative feedback than when they provided them with positive comments. These differences were statistically significant for all types of teacher. On average under 10% of positive feedback contained the pupils name whereas between 25% and 48% of negative feedback did so. It is worth remembering too that on the whole negative feedback was predominately directed at pupils' behaviour and positive feedback at their work. It is possible that one reason for this difference may be that teachers are using the pupils' name to get their attention as, "Jimmy....don't do that please". This phenomenon is well known in psychology. Cherry (1953) demonstrated the effect that the mention of a subject's name had on attracting their attention in order to attend to the speaker.

The small proportion of positive feedback that is personally directed is worthy of comment. Studies from social psychology i.e. Garrity and Degelman (1990) have shown that people seem to approve of the use

of their personal name and will change their behaviour as a result. One might infer therefore that use of a pupil's name when giving approval may strengthen the effectiveness of the feedback. It is therefore disappointing to report that this type of feedback is still so under used even after teachers had been encouraged to do so in the training.

Another feature worthy of comment is the differences apparent between teachers at the three levels. Secondary teachers tended to use pupils' names at almost half the rate of their primary school colleagues when giving negative feedback and at two thirds the rate compared with other teachers when giving approval. Such a difference may well be influenced by the fact that while infant and junior teachers usually teach the same group all day and only have to remember thirty names. Secondary teachers may have to teach over two hundred different pupils in any one week and therefore may not be able to recall all names immediately. On the other hand it could be the case that especially where positive feedback is concerned that secondary teachers are aware as Hanko (1993) suggested that for some secondary pupils named praise may be counter-productive. They may therefore have deliberately amended their feedback so as not to draw too much personal attention to individual pupils by deliberately naming them.

There was a marked difference in the proportion of feedback that was directed towards individuals rather than groups. Most feedback provided by all types of teacher, approximately 85%, was directed towards individuals. The vast majority of this was positive feedback, the majority of which, of course, was mainly feedback concerning the pupils' work.

The pattern for group feedback was the reverse. The majority of group feedback was negative. Group negative feedback was recorded at twice the rate of group positive feedback. Disapproval on a group basis is a well-known technique for establishing order as in "OK class six, all stop talking and get out your text books". A number of similar examples were recorded. The pattern of individual and group feedback seemed very similar across all levels of classes observed. It would therefore seem to be a common feature of all teachers' pattern of feedback. The fact that the vast majority of feedback is individual praise directed to pupils working individually highlighted the narrowness of the focus of teacher approval. It also contrasts with the comparatively limited use of teacher approval used on a group basis.

The third feature of feedback that was examined was teachers' use of redirection following negative feedback. The overall percentage of negative feedback that included a redirection was found to be around 30%. The figure was highest for the infant teachers, 36%, but little difference

was found between the proportions given by junior teachers, 24% and their secondary colleagues, 27%. The fact that teachers of the youngest children use most redirection is understandable in terms of teachers' perception that the pupils may not already know class rules and routines and is probably a finding that would be predicted, even without previous research. However it is also salutary to note that for the remaining two-thirds of admonishments infant teachers give no redirection, and so we might make the assumption that teachers feel their pupils all know what they are expected to do or how to behave. This is an assumption made more frequently by junior and secondary teachers.

An overview of the data from teachers in infant, junior and secondary classrooms shows that in their use of verbal feedback, they appear to have more in common with each other than they have differences. All teachers appear to direct most positive feedback towards pupils' work and negative feedback towards their behaviour. There also appears to be considerable consistency amongst all types of teacher in terms of their use of positive feedback. Their use of descriptions, use of pupils' names and their use of feedback directed to individuals as opposed to groups are strikingly similar. Differences are apparent in their use of negative feedback. Infant and junior teachers appear to have very similar styles, but there is a marked contrast between them and secondary teachers. Secondary teachers provide negative feedback at a higher rate



than their primary colleagues do, hence the proportion of positive to negative feedback as expressed, as a ratio is larger. This feedback is less likely to contain a description, is less likely to mention the pupils' name and is more likely to be directed towards a group than would be the case in a primary classroom. These differences may be reflected in the correlation data, which is outlined in the following section.

### Feedback and Pupil Behaviour

Pupil behaviour and its relationship to teacher feedback was a key area of this study. The on-task rates that were recorded in classrooms were around 80% for all types of classes. This was a similar rate to that found by both Rutter (1975) and Wheldall Houghton and Merrett (1989) in secondary classes but higher than that found by Wheldall and Merrett (1987) in primary schools. There were of course methodological differences between the studies, which could account for these differences. In particular there are differences in classroom practice which may have changed as a result of a more didactic style of primary teaching following the introduction of the National Curriculum and the Literacy and Numeracy Hour. The effect that these changes have had on teacher behaviour are outlined by Galton, Hargreaves, Crommer, Wall and Pell (1999) in their follow up to an earlier study by Galton, Simon and Croll (1980) some twenty years previously. They reported a number changes in

teachers' behaviour. As far as teachers' verbal behaviour is concerned they reported an increase in teachers' use of closed questions and task supervision questions. They related this shift in more whole-class teaching, implicit in many of the recent changes in classroom practice. It is possible that these changes might have some effect on the differences between the findings of this study and those carried out before these changes were introduced.

As with overall rates of on-task behaviour, little difference was found between the three types of school in the different types of off-task behaviour observed. The only exception to this was the rate of 'out of seat' behaviour which was much higher in primary classes than it was in most secondary classes. This difference was probably a reflection of classroom practice and layout as much as teacher tolerance.

The relationship between on-task behaviour and teacher verbal feedback is one explored in a number of earlier studies. The results of this investigation showed very similar results to most other studies. The overall correlation between positive verbal feedback and on-task behaviour was found to be 0.312, very similar to two studies with secondary pupils, Winter (1990), 0.403 and Wheldall Houghton and Merrett (1989), 0.44. This was a good deal higher than the Wheldall and Merrett (1988) study of primary and middle school classes who found a

correlation of only 0.1. The correlations in this study at the various school levels were reasonably consistent. Infant 0.361, Junior 0.422 and Secondary 0.288. Attributing causation to correlational data is always hazardous but there is a temptation to suggest that such a series of results indicate that primary school teachers' use of approval is more reinforcing for their pupils than for older children. Alternatively it could be that primary teachers are more likely to notice and respond approvingly to appropriate behaviour when they see it.

Not surprisingly the relationship between on-task behaviour and negative feedback is a negative one. Other studies have shown correlations of between -0.3, Wheldall Houghton and Merrett (1989) and Wheldall and Merrett (1988) and -0.403, Winter (1990). This figure is not dissimilar from this study which found a relationship of -0.463. Within the sample however considerable variation was apparent between the different types of classes. In Infant classes the correlation was small at -0.213. It was slightly higher in junior classes at -0.325, but reached statistical significance in secondary classes at -0.689. This difference may be related to differences in teacher style, especially in secondary teachers' in their use of negative feedback. Secondary are less inclined to use a description in negative feedback, less likely to use pupils' names and more likely to use negative group feedback than their primary school colleagues.

The smaller correlations at the infant and junior level may not tell the entire story. When the relationships between teacher negative feedback and on-task behaviour is displayed as a scattergram, different patterns of the relationship are revealed. The secondary school data shows a consistent straight-line relationship (fig 3 page 113). The infant scattergram appears to curvilinear relationship (fig 1 page 112). It is tempting to view the junior data as a conglomeration of the two.

One needs to be extremely cautious in interpreting correlational data especially when it is presented graphically. However it would appear that the treatment of the data from infant classes shows an inverted 'U' effect. In infant classes both low and high levels of disapproval appear to be associated with lower level of on-task behaviour. Higher levels of on-task behaviour are with a medium level of negative feedback. It may be the case that in one condition, when teachers give low levels of disapproval they are ignoring too much inappropriate behaviour but as rates of disapproval increase then there is an associated increased on-task behaviour. Then when at a certain level, its effectiveness becomes reduced and off-task behaviour increases, as perhaps the children begin to ignore the rebukes. In this sample that cut off point would appear to be around the rate of negative feedback of 0.6 per minute. Since the data are correlational it is necessary to be wary of ascribing attribution, although it is difficult to think of an alternative explanation. This observed

curvilinearity is, of course, not in conflict with that of Acker and O'Leary (1987) since the teachers in this study may well have been using an optimum level of reprimand. It should also be borne in mind that the quality of negative feedback by Infant teachers in this sample was somewhat different from other teachers. Firstly they appeared to include a description with the majority of their negative feedback, 69%, (see Table 14, page 99) and they gave a more redirection to their pupils following negative feedback than other teachers, (see table 20, page 105). It may be that it these two factors had some influence on the different pattern of infant pupil behaviour compared with older pupils.

This explanation does not apply to the secondary sample. Here low levels of negative feedback are associated with high on-task rates and high levels of disapproval are associated with low on-task rates. Again one must be cautious in interpreting correlational data. However the fact that low levels of disapproval were recorded in classes with high on-task rates is hardly surprising. If pupils are getting on with their work then there is no need to tell them off. Alternatively if they aren't working well and are off-task then one would expect a higher rate of disapproval. This explanation is of course one that portrays the teacher in a very passive role responding to the pupils' behaviour rather than attempting to change behaviour through use of feedback. Brophy (1981) makes this point at some length. Whatever the explanation, one thing is perfectly evident from

the data, if teachers want to improve the behaviour of difficult secondary school pupils; repeatedly telling them off is not a strategy that according to this data is likely to work.

It is clear that there were marked differences in the pattern of pupil behaviour to their teachers' use of negative feedback as represented by the differences in the correlations between pupil behaviour and teacher negative feedback. At Infant level the correlation was weak,  $R = -.213$ , slightly stronger at junior level,  $R = -.325$  and only reached a level of significance for the secondary sample,  $R = -.689$ . This of course is represented graphically in the angle of slope of the graph, see page 113.

The fact that teachers persist in using negative feedback to such a degree, despite its measured ineffectiveness is an interesting one. Much of the early work in this area was carried out by Kounin and his colleagues, Kounin (1967), Kounin and Gump, (1958) and Kounin, Gump and Ryan (1961). They studied what they called the ripple effect; how a teacher's method of handling the misbehaviour of one child influences the behaviour of other children who are audiences to the admonishment, but not themselves targets. They pointed out that from the teachers' perspective two things happen when pupils are told off. First the behaviour, which has been the subject of the admonishment invariably, stops and second, the behaviour of the rest of the group also improves.

Kounin and Gump (1958) described the ripple effect in older students, but found that it was less apparent in younger children at kindergarten, Kounin, Gump and Ryan (1961). This effect maybe more apparent than real. Kounin's later work (1967) involved a detailed study using videotape analysis of secondary school classrooms and their students. He was able to conclude, ' the techniques of dealing with misbehaviour as such, are not significant determinants of how well or poorly children behave in classrooms, or with how successful a teacher is in preventing one child's misbehaviour from contaminating others,' (page 70, Kounin, 1970)

That secondary teachers appear to be more persistent in their use of negative feedback, despite the fact that it appears from the data in this and other studies not to be an effective method of changing pupil behaviour, could be due to a number of factors including their perception of the ripple effect. More fundamentally however the fact that all teachers seem to persist in their use of negative feedback especially in response to pupils' behaviour needs to be examined in greater detail. It may be a reflection of our society when punishments for rule breaking are common and rewards for appropriate behaviour seem scarce. Whatever the reason, it is clear that many teachers appear to get immediate positive feedback for using negative feedback, which may explain why they persist in its use.

It is probable, as Brophy (1981) has stated that almost all negative feedback is provided by teachers as a result of them being aware of pupil misbehaviour. Having told off the pupil or group of pupils the behaviour invariably ceases albeit temporally. Hence the teacher perceives that the strategy has worked. In behaviourist terms the teachers' behaviour has been immediately reinforced by cessation of the unwanted behaviour. This of course is the opposite situation when teachers use praise, when there may well be no dramatic change of behaviour as a result of the verbal feedback, just maintenance of existing behaviour. Indeed they are probably also unaware of the positive ripple effect that praising one child can have on the behaviour of others in the class, see Harrop (1978). In short teachers may be responding to short-term reinforcement rather than long term aims and are clearly ignoring the other well known behaviourist phenomenon that the more punishments are used, the less effective they become, see Skinner (1968).



## Chapter 3

### Study 2

**The effect that changes in the quality and quantity of teacher verbal feedback has on the behaviour of pupils**

### Review of Literature

#### The evaluation of teacher training programmes

It was pointed out in the review of literature in the introduction to the first study, see the previous chapter, that there have been a number of research studies that have recorded improvements in pupils' behaviour following changes in teachers' behaviour. Generally these found that when teachers gave more positive feedback to their pupils, the pupils responded by reducing aspects of 'problem behaviours' and improving their appropriate behaviour, i.e. Barrish et al (1969), McAllister et al (1969), Long and Williams (1973), Wilson and Hopkins (1973), Merrett and Wheldall (1978) and Nau et al (1981).

This fundamental aim of encouraging teachers to become more specific in their use of feedback and to become more positive in their responses to pupils behaviour have been incorporated into a number of training packages aimed at helping teachers become better classroom managers. An early example of such training can be found in a report by

Merrett and Baddeley (1989) carried out a similar study to evaluate its effectiveness. This paper is interesting in that it contains two studies. In the first study nine teachers were given the BATSAC training. Their classes were observed before and after training. The teachers use of disapproval decreased and an increase in on-task behaviour was noted, but they did not record any significant increase in the teachers use of approval. In the second study a modified version of BATSAC was employed with 14 teachers and their classes in another secondary school. In this study teacher approval was increased, the use of disapproval decreased and pupil on-task behaviour increased, all significantly. This improvement they related to the fact that more direction had been given to the teachers not only on the importance of positive feedback but importantly how it is to be delivered

A smaller scale study by Merrett, Jackson and Fitzpatrick (1991) examined changes in the verbal feedback following BATSAC training of two secondary school teachers, which showed similar changes to the primary school studies both in terms of the teachers' change in behaviour and that of their pupils.

Given the extensive research by Wheldall and Merrett and their colleagues at the School of Education at Birmingham University in the 1980s and the planning that must have gone in to the preparation of both BATPACK and BATSAC it is surprising that the research into the

positive it is difficult to know which aspect of the programme effected the change in pupil or student behaviour.

In Great Britain there have been at least four published papers that have reported increased on-task behaviours of pupils in a variety of settings following the training and introduction of Assertive Discipline practice in classrooms.

Nichols and Houghton (1995) recorded on video the teachers and a proportion of their pupils both before and after the introduction of the Assertive Discipline techniques into 15 classrooms in five different schools in various parts of England. They were able to record the verbal behaviour of the teachers and the behaviour of a sample of eight children from each class. They used the OPTIC schedule to record the behaviour of both teachers and pupils. They found that after training the teachers increased their use of positive feedback and reduced their use of negative feedback or admonishments. They also recorded a decrease in disruptive incidents and an improvement in the pupils' on-task behaviour.

Swinson and Melling (1995) also found similar results of increased positive feedback and decreased negative feedback by teachers and a consequent improvement in pupil behaviour in a study of nine classes in two different Liverpool primary schools. Swinson and Melling used the Pupil Behavioural Schedule, devised by Jolly and McNamara (1992) to record both the verbal behaviour of the teachers and the behaviour of all

note that although the changes in both teacher and pupil behaviour shown in both these training packages include not only advice on teachers' use of praise and acknowledgement, but also advice on other strategies. Batpack includes advice on seating plans and Assertive Discipline provides detail instruction on the use of sanctions. Therefore although following training both programmes can demonstrate an increase in positive feedback it is impossible to demonstrate that any change in pupil behaviour was solely the product of such change.

### **Concluding Remarks**

This review has evaluated the research into the use of strategies employed by teachers in their classroom practice to create and maintain good order. More specifically it has concentrated on the way teachers use techniques of verbal feedback to increase pupils' on-task behaviour.

Much of the experimental work in this area owes its origin to the longstanding research of Madsen et al (1968) and O'Leary and their colleagues. It is worth pointing out that much of this work is over 30 years old, it has largely remained unchallenged, at least on an experimental basis. Similarly observational work by White and others into natural rates of verbal feedback is also now dated. Although their work has been replicated across the English speaking world, it is difficult not to agree with Schwieso and Hastings (1987), page 17, that 'there is a relative

### **The aims of this study**

- i) To examine the effect of training infant, junior and secondary teachers to alter their verbal feedback and become more positive. The effectiveness of the training was evaluated in terms of changes in :
  - a) Rates of positive and negative feedback
  - b) Teachers use of pupils names
  - c) Teachers use of descriptions
  - d) Teachers use of redirections following negative feedback
- ii) To examine the effect that changes in teachers' verbal behaviour has on the on-task behaviour of the pupils in each class.

### **Methodology**

In this investigation staff from a group of six schools, one secondary and five primary, that were part of the original phase of the investigation, took part in a training study aimed at examining the effect that training teachers to change their use of verbal feedback had on the behaviour of their pupils. The schools were all part of an Educational Action Zone (EAZ) and had been nominated by their Head teacher for whole school training in classroom management. This sample included six infant teachers, six junior teachers and seven secondary teachers. It also allowed an opportunity to examine how changes in teachers' verbal feedback effected the behaviour of their pupils.

'... no teacher wishes to improve a pupil's behaviour and then let it deteriorate again in order to demonstrate that the treatment has been effective.'

An alternative design would have been to employ a control group. In this study that would have meant selecting a set of classes in each school whose teachers did not receive any training and therefore were unable to employ a more positive approach with their pupils. Thus a comparison could have been made between the behaviour of both teachers and pupils those classes whose teachers had had the training and those classes whose teachers had not had the training. Such comparison could have been made in both sets of classes before and after the training had taken place. This proposal was discussed with a number of schools in the study. However all headteachers felt that it was important for all teachers in their school to have the training. The Headteachers also did not feel it to be an efficient use of the schools in-service training time to give the training in two halves. The only other alternative would have been to have a control group from another school, but as Sommer and Sommer (2002) point out, such an arrangement would have produced too many other variables into the study to make any comparison to invalid.

Thus for both practical and ethical reason the simple 'before and after' A-B design was employed.

The initial set of observations took place in the week before the training. The second set took place between four and six weeks after the

training. It was arranged that this second set of observations took place on the same day of the week and at the same time of the school day. In the case of the secondary school this meant that exactly the same subject was being taught to exactly the same teaching set as in the first set of observations.

### **Schools**

The schools, which participated in this phase of the investigation, were all members of the Salford/Trafford EAZ (Educational Action Zone). The EAZ had funded a number of initiatives including training in behavioural management. The schools had all opted for this training to help improve aspects of the management of behaviour in their school. It was explained to all the teachers that this training would be evaluated in some depth and that this would involve a series of classroom observations, both before and after the training took place.

A group of teachers from each school volunteered to allow observations to be made in their classroom. The initial set of observations took place in school during the week prior to the training. The second set of observations of each teacher took place between four and six weeks after the training at the same time and day of the week. The lesson content of course varied but all lessons were of a similar type in terms of organisation and structure.

## The Training

The training, in the case of the primary schools took place after the school day. It lasted approximately two hours. In the case of the secondary school the training was part of an in-service day. It lasted approximately two and half-hours. The content was essentially the same as that used for the primary schools, but with an emphasis on the type of problems that might be more apparent with older pupils. The extra time taken was largely spent answering the questions from what was a larger group, approximately 60 teachers, as all the teachers in the school took part in the training.

The training consisted of two elements. Firstly feedback to the school on the initial set of observations and secondly a 'Power-Point' presentation 'Managing behaviour – four essential steps'.

### Element One

The feedback on the teachers' current use of verbal feedback was based on a preliminary analysis of the original sets of pre-training recordings. The identity of individual teachers was kept confidential, the results were reported only on the basis of the whole school results and were reported back only in terms of percentages of feedback given. The rates of individual teachers were not reported.



Thus each school was informed of the average proportion for their school of: -

Percentage of positive feedback

Percentage of negative feedback

Percentage of positive feedback for work (academic)

Percentage of positive feedback for behaviour (social)

Percentage of negative feedback for work (academic)

Percentage of negative feedback for behaviour (social)

Schools were told that on the whole most feedback was delivered to individuals not groups and that only a minority of feedback contained a description. It was not possible to provide any more detailed analysis at this point in terms of teachers' use of pupils' names, or their use of redirection.

Feedback given to the teachers included the fact that without exception the results showed a consistent pattern that reflected the type of research outlined in the previous chapter. In other words, most positive feedback was reserved for pupils' work, while most negative feedback was directed towards pupils' behaviour. Some negative feedback was given for pupils' work, but very little, if any, positive feedback appeared to be directed towards pupil behaviour.

The proportion of negative feedback that was followed by a redirection was discussed, as was the use made of descriptions.

Comparisons were made with previous research in this area, notably the work of Wheldall and Merrett and their colleagues. Not surprisingly the results from each school proved to be in very similar to the previous research in both Great Britain and also across the world.

It was pointed out to the teachers, however, that their current teaching style was essentially a reactive one in that much of their feedback, especially their negative feedback to social behaviour was in response to pupil or groups of pupils that basically were not doing as they were told. It was explained that telling-off pupils was essentially a very limited strategy, which only yielded short-lived changes in behaviour. It was argued that a much more proactive strategy, one that involved providing a great deal more in terms of positive feedback, especially positive feedback aimed towards the pupils' behaviour might prove much more effective way of leading to improved pupil behaviour and learning. Generally at this point a discussion of these issues took place. In all the schools no teachers presented any major objection to the central argument that being proactive and making a deliberate effort to be more positive towards pupils then as a result the pupils would be better behaved and therefore more time spend by them on their work.

## Element Two

This element consisted of training of the teachers.

The training programme was devised by the author and two colleagues, Richard Melling, an Educational Psychologist and Mike Cording, formerly the head of a school for children with Emotional and behavioural Difficulties (EBD) and presently a behavioural consultant. It developed from a consideration of the research by the author and Richard Melling into the effectiveness of the Assertive Discipline training, ( Swinson and Melling, 1995). It was noticed in this research that despite the fact that this particular training programme included considerable advice on the use of sanctions, in practice teachers did not use these. The reason for this we assumed was that the advice in the training on the use of positive feedback was so effective in modifying the pupils' behaviour that any use of sanctions became superfluous. We were also conscious in previous training we had given, that teachers found it very hard indeed to ignore disruptive or other off-task behaviour by pupils, a tactic suggested by many earlier practitioners, i.e. Madsen et al (1968), Harrop (1974) and indeed in Backpack, Wheldall and Merrett (1988). Hence we included a section in the training on positive responses to disruptive and off-task behaviour.

The four essential steps can be summarised thus:

## **‘ Managing Behaviour 4 Essential Steps’**

- 1) Always make your requirements absolutely clear**
- 2) Remember to look for behaviour you want rather than the behaviour you don’t want**
- 3) Frequently acknowledge students when they are doing what is required**
- 4) Change the frequency of the feedback to suit each situation**

The presentation used ‘Power-Point’ and comprised 23 overhead projections. Most projections included a graphic designed aimed at representing the point that was being made but containing only very basic written material. Teachers were provided with a copy of the presentation and were encouraged to make notes. (A copy of the presentation is contained in Appendix 5).

The presenter spoke briefly about the key point of each projection and encouraged discussion whenever any point needed clarification.

What follows is an account of each projection together with a brief synopsis of what was said to the teachers.

Slide 1

**Step 1 ‘Always make your requirements absolutely clear**

*It is vital that all teachers inform the class exactly what they want the pupils to do at all times during the class. Never assume they already know.*

Slide 2

**‘Guidelines for teaching your requirements’**

Keep the requirements simple – limit the number

Requirements must be observable

Requirements must relate to how the pupil is to participate in the activity

Requirements must relate to how the pupils’ behave in order to be successful

Slide 3

**'The M.I.N.C.'**

M(aterials students need)

I(n seat or out of seat)

N(oise level expected)

C(ommunicate with teacher)

*MINC is a acronym designed to help teachers remember that their directions should always contain instructions about the noise level, materials needed where the pupils were expected to sit, and how they were expected to communicate with each other and especially the teacher. This last section should include guidance on putting your hand up if you have a question.*

Slide 4

**'Teach your requirements for each class situation'**

State your requirements

Question pupils for understanding

Role play with pupils

Repeat your requirements as required

*Each new phase of the lesson may need the teacher to teach new requirements. Don't assume they know what is expected of them; therefore teach the requirements, including role-play if appropriate.*

Slide 5

**Step 2 Remember to look for the behaviour you want rather than the behaviour you don't want'**

*This slide was in some ways the most important one of the whole presentation and considerable time was spent explain its importance.*

*Teachers were told that every time they gave a direction, instruction or asked a question they were to look for a pupil or groups of pupil that were doing as they were told and to either directly praise them or let them know they were doing as was required e.g.*

*'Well done Blue group you're tidying up well' (praise) or*

*'I can see a number of you have already got your books out'*

*(positive acknowledgement)*

*It was pointed out that on average teachers gave some sort of direction to the class every minute, and therefore there were many opportunities for positive feedback.*

Slide 6

**'Using feedback for appropriate behaviour to get students on task'**

Give requirements

Look for students following requirements

Say name, repeat requirements and use an approving comment

*This slide essentially repeats the point made in slide 5, but adds the advice that naming the pupil or group of pupils adds to the strength of any positive acknowledgement. In addition, the use of a description to explain the reason for the acknowledgement adds further strength, but also repeats for the rest of the class the original direction. Therefore any pupil who didn't hear the original instruction or direction will hear it again, have another chance to do as they have been asked and recognise that they too may have a chance to receive an acknowledgement from the teacher for doing as they have been told.*

Slide 7

**Step 3 Frequently acknowledge students when they are doing what is required. Consider using 'whole class rewards'.**

*It was pointed out that it was important to give both praise or positive acknowledgement not only immediately after a direction or instruction but also while students were working to increase the likelihood of them remaining on task. Whole class rewards, that is the awarding of points to the whole class, which could be cashed in at a later date for a reward was also an option, especially for difficult classes.*



Slide 8

**Feedback for appropriate behaviour (appreciation, praise certificates etc.) may appear to have little effect in the short term but will actually teach new behaviour habits and social skills.**

*Teachers were told not to expect immediate results, but rather a gradual improvement in their pupils' behaviour. New behaviour is not learnt over night!*

Slide 9

**Appropriate feedback for students**

**Individualised and sincere**

**Appropriate and descriptive**

**Matter of fact**

**Personal and private**

*Teachers were advised that the use of the students' name and the use of a description gave added weight to positive feedback. They were also advised not to be too effusive in their use of praise. As far as possible, to concentrate on the facts and especially with older pupils to give feedback privately.*

Slide 10

**Keeping students on task**

**Consistent feedback for appropriate behaviour**

**Scanning**

**Circulating the room**

**Class Rewards**

*Teachers were told again to continually acknowledge those who were on task, by ensuring that they scanned the class, circulated around the room, looking for and acknowledging appropriate behaviour.*

Slide 11

**Extrinsic rewards may be counter productive**

*Teachers were advised that individual extrinsic rewards might be counter-productive. Reference was made to the writings of Stuart Sutherland (1992). Teachers were generally not encouraged to use extrinsic rewards. It was pointed out that while rewards had limited value, feedback was a vital element of learning and that praise acted in a different way from extrinsic rewards in that it could be internalised and could have a beneficial effect on aspects of the personality such as self-esteem.*

Slide 12

### **Whole Class Rewards**

**Extrinsic rewards itself will not be effective in changing behaviour.**

**However, it provides a vehicle for giving the potentially powerful intrinsic reward of positive feedback.**

*Teachers were told that in some cases, with difficult classes, or ones with younger pupils, then, the limited use of whole class rewards could be useful as they provided an easy method of drawing the attention of the class to appropriate behaviour, i.e.*

*'Well done 2c you are all working quietly, that's one class point.'*

Slide 13

### **Step 4**

**Change the frequency of the feedback to suit each situation**

**I.e. more feedback for appropriate behaviour at the beginning of a lesson or a new activity.**

*Teachers were told to give more feedback at the beginning of any new activity or when a new set of instructions was given.*

The training also contained two pieces of advice on how to deal with off task behaviour. A differentiation was made between off task behaviour that was nondisruptive, e.g. gazing out of the window and disruptive behaviour e.g. shouting out in class.

Slide 14

#### **Non-Disruptive off task behaviour**

- **Avoid recognising inappropriate behaviour.**
- **Try the 'proximity praise' technique first**

*Teachers were advised not to draw attention towards pupils who were off task, but rather use a technique called proximity praise, that is to praise pupils next to or near the pupil who is off task i.e., if Jimmy is sitting next to Carl and Carl is day dreaming and not therefore working simply praise Jimmy thus ' Well done Jimmy, I can see you're working hard.' The likelihood is that on hearing Jimmy being praised, Carl will begin to work.*

Slide 15

#### **Re-directing off-task behaviour**

**The look**

**Use of names**

**Physical proximity**

**Proximity Praise**

*Three other methods of encouraging off-task pupils were noted. The use of the look, i.e. staring at the pupil, the use of the pupils name, i.e. 'As James knows well seven is the square route of 49' and physical proximity, i.e. just standing next to the off-task pupil.*

#### Slide 16

##### **Remember never ignore disruptive behaviour**

*Teachers were told that to ignore disruptive behaviour was to invite trouble. Pupils needed to be given firm boundaries as to what they could and could not do, and would often test the teacher out to find his or her limits.*

#### Slide 17

##### **Refocusing techniques**

**Stay calm**

**Focus on desired behaviour**

**Repeat as necessary; use the broken record technique**

*Teachers were told to attempt to get the disruptive pupil back on task, repeating the directions needed in a calm manner repeating them as often as is necessary i.e.*

*'Jason I need you to return to your seat and get on with your work quietly  
Jason I need you to...'*

Slide 18

**Supporting students who continue to ignore your requirements.**

**Get close**

**Use eye contact**

**State expectations clearly and quietly**

**Remind student of the consequences**

**State what will happen next**

*Teachers were told in these circumstances to stand close to the pupil, make eye contact and to spell out to them the consequences of their continued disruption, i.e.*

*'Jason, you know our class rules, I need you to be sitting at your desk, working at your maths, which is on the board. If you cannot you will have to go to the duty room. The choice is yours. Sit down and work quietly or I will have to give you a referral slip and send you to room 13.' (If Jason does sit down then he should be praised)*

*'Well done Jason a good choice there!').*

Slide 19

**Use the short circuit criteria, when a student; -**

**Wilfully hurts another child**

**Deliberately damages property**

**Overtly refuses to do as he/she is told**

**Engages in any behaviour that stops the class functioning**

*The teachers were told that there were for types of behaviour as outlined above for which there was no negotiation and would result in immediate removal from the room or the calling of a senior manager.*

Slide 20

**Why should we use approval?**

**Disapproval cannot teach new behaviour**

**Disapproval can make behaviour worse**

**New behaviour can only be taught through approval and feedback**

*The central message of the presentation was repeated. Teachers were invited to adopt a proactive positive approach to improving behaviour in their class.*

Slide 21

**Remember, Sanctions are like petrol – highly inflammable**

**-Only use consistently, systematically, predictably and dispassionately.**

**Remember telling off is not a sanction.**

The teachers were reminded that sanctions were of limited effectiveness, and that any effect that they did have was only short lived. Telling pupils off was a complete waste of breath unless the pupil was given some indication of expected behaviour i.e. a redirection, 'Tommy don't do that, I need you to stay on the mat during story time.'

Slide 22

### **Integrating Behaviour Management Skills**

**Don't use skills in isolation**

**Adapt to your personal style**

**Incorporate with your teaching.**

Teachers were advised to incorporate this positive approach into their own teaching style and to adapt it to suit their needs. They were told there was no set way to teach, but they would find their pupils behaved better and would learn more, if they attempted to become more proactive acknowledgers of their pupils' good behaviour.



The programme was received well by most teachers. A number of teachers asked a series of questions but none raised any practical or philosophical objection to the approach.

The Headteacher of each school was asked to be present at the training and at the end of the training session was asked to make comments. All head teachers were complimentary about the content and encouraged their teachers to adopt the approaches outlined in the training.

## **Results**

### **Introduction**

The results in this section are presented in the following fashion. First the similarity between the original sample and that involved in this training study will be established. Secondly the changes in the teachers' verbal behaviour as a result of their training is reported. Thirdly the changes in pupil behaviour both in terms of their on-task rates, but also any changes in the nature of their off-task behaviour is reported. Fourthly the relationship between the changes in teacher verbal feedback and the changes in pupil behaviour is explored.

### **Sample**

In this training study a group of six schools, five primary and one secondary, who formed part of the original cohort, were nominated by their respective Headteachers to have training in the use of verbal

feedback in the expectation that it could lead to improved behaviour by their children. The schools in the study were all schools in the Salford/Trafford EAZ (Education Action Zone). They were schools whose pupils were from neighbourhoods with a higher than normal level of social deprivation. The staff of the schools felt that they had a higher proportion of classroom problems in terms of their pupils' learning and behaviour. Although the decision to take part in the training was made by the senior management of each school, the teachers who took part in the observations were all volunteers and were given the same assurances of confidentiality as all teachers in this research.

An analysis was made to compare the behaviour of both the teachers and pupils in the training sample with that of the larger sample. Although some differences were found, none of these proved to be a statistically significant ( $p > 0.05$ ) in all cases. See table 27.

**Table 27**

A comparison of key variables (rates of feedback and on-task percentages) between the training sample before training and the phase 1 study

Key variable	Main Sample N=50	Training Sample N=19	T
Infant rate -ve feedback for behaviour	0.54	0.38	0.445
Infant rate +ve feedback for work	1.53	0.82	1.756
Infant percentage on-task	81.24	78.72	0.935
Junior rate -ve feedback for behaviour	0.44	0.427	0.0649
Junior rate +ve feedback for work	1.12	1.3	0.0899
Junior percentage on-task	78.47	77.72	0.0714
Secondary rate -ve feedback for behaviour	0.733	1.234	0.501
Secondary rate +ve feedback for work	1.26	0.74	1.496
Secondary percentage on-task	81.58	67.14	1.823
Total rate -ve feedback for behaviour	0.386	0.680	0.916
Total rate +ve feedback for work	1.303	0.953	1.023
Total percentage on-task	80.43	74.51	1.007

Thus in statistical terms the training sample is not significantly different from the main sample. Some differences were apparent in the measured on-task rates and negative feedback rates for behaviour especially in our secondary sample. To some extent, especially in the case of the low on-task rates recorded at the secondary school this may be

reflection of the stated need of the schools in the training sample to request training in behavioural management for their teachers.

### **Teacher Verbal Feedback**

Initially the teacher verbal feedback is reported in terms of the total sample, further consideration is given to teachers at Infant, Junior and Secondary levels.

#### **Total rates of Verbal Feedback**

The rates of the amount of feedback of all types was recorded and is presented in table 28

**Table 28**

The mean rate of feedback per minute given by teachers before and after training

Type of School	Pre-Training	Post-training	Difference
Infant N = 6	1.592	2.200	+ 0.608
Junior N = 6	2.301	2.618	+ 0.317
Secondary N = 7	2.342	2.109	- 0.331
Total N = 19	2.091	2.298	+ 0.207

Although there was marked increase in the rate at infant level the differences at junior and secondary were smaller. None of these differences was found to be statistically significant.

The changes in the various types of verbal feedback were also recorded and are tabulated in table 29.

**Table 29**

The changes in rates of different types of verbal feedback, before and after training (n = 19)

Type of feedback	Pre-Training Rate	Post-Training Rate	T	Significance
Positive for work	0.955	1.556	-4.592	0.000**
Positive for behaviour	0.138	0.350	-3.886	0.001**
Total Positive	1.093	1.906	-.5.624	0.000**
Negative for work	0.231	0.117	2.280	0.035*
-ve for behaviour	0.768	0.275	3.018	0.007**
Total Negative	0.999	0.392	3.793	0.001**
Ratio +ve/-ve	3.036	10.646	-3.031	0.007**

**\*\*significant at the  $p > 0.01$  level**

**\* significant at the  $p > 0.05$  level**

The changes in the rates for the various types of feedback were significant and in the direction anticipated by the training i.e. to increase the proportion of positive feedback and to decrease the proportion of negative, especially that directed towards pupil behaviour . In fact the rate of positive feedback almost doubled while the rate of negative feedback was reduced by two thirds. This pattern can be seen more clearly when feedback is presented in terms of percentages as in table 30 and when they are presented as ratios ( see table 31, 33 and 35 ).

**Table 30**

**The percentage of different types of feedback after training compared with the same sample before training (pre-training sample in brackets)**

**N = 19**

Feedback	Positive	Negative
Work	67.9 (48.0)	5.28 (11.7)
Behaviour	17.1 (5.6)	9.6 (34.6)
Total	85 (53.6)	14.8 (46.3)

This table demonstrates a major shift in the teaching strategies of the teachers in the sample. The smallest change was the change in the percentage of negative feedback directed towards work which fell in actual percentage terms by 5%, this does however mark a halving of the rate. Other changes are considerable i.e. the proportion of total positive

feedback shows an increase of 25%. Increases both in positive feedback towards work (a 20% increase) and towards behaviour (a 30% increase) were apparent. Bearing in mind the overall rate of feedback remained at a similar level after training as it had been before, see Table 27, these changes in all types of positive feedback have been largely as a consequence of a 25% reduction in the negative feedback directed towards behaviour. Teachers therefore appear to be adopting a positive based strategy for encouraging both good work and for encouraging good behaviour.

There was a variation in the way teachers from the different types of school responded to the training. These are examined in further detail by considering the results of the training for each phase of education separately.

## **Infant**

In table 28 it was noted that in the sample of Infant teachers there was slight increase in the overall rate of total feedback from a rate of 1.59 episodes per minute to one of 2.20 per minute. This final rate was very similar to the rate of the whole sample after training, which was recorded at a rate of 2.298. So it would appear that one result of the training was to increase the total amount of feedback given by the infant teachers.

However the most important change shown by the infant teachers in the

sample was the more than doubling of their rate of positive feedback, see table 31. The change was far greater than for the other groups of teachers.

Changes in different types of feedback were also recorded and are presented in table 32, in terms of not only the changes in the rates of positive and negative feedback. The changes in actual rates of positive and negative feedback are recorded in Table 31, as is the ratio of positive to negative feedback which in the case of this infant sample shows a dramatic increase.



**Table 31**

**The changes in rates and ratio of feedback by Infant teachers as a result of the training (n = 6)**

Type of feedback	Pre-training	Post-training	t	Significance
Rate Total Positive	0.974	1.988	-6.219	0.002
Rate Total Negative	0.618	0.212	2.225	0.10
Ratio +ve/-ve	2.066	14.923	-2.015	0.10

The most dramatic change in the Infant teachers was recorded in the increase in their rate of positive feedback. This is in turn reflected in a change in teacher behaviour as presented as a ratio. In terms of the proportions of various types of feedback these are displayed in Table 32.

**Table 32**

**The percentage of various types of feedback by Infant teachers before and after training (percentage of pre training rates are in brackets). (N = 6)**

Feedback	Positive	Negative
Work	72.2 (50.9)	4.5 (14.8)
Behaviour	18.0 (10.4)	5.3 (23.8)
Total	90.2 (61.3)	9.8 (38.6)

This shows a reduction of almost exactly 75% in the proportion of total negative feedback, especially in the proportion of negative feedback directed towards pupils' behaviour and a consequent increase positive feedback especially that directed towards pupils' work.

## Junior

There was little change in the overall rate at which junior teachers provided verbal feedback to their pupils, see table 29. However like their infant colleagues there were changes in the types of feedback they gave their pupils, see table 33.

**Table 33**

**The changes in mean rates and ratio of feedback given by junior teachers as a result of the training (n = 6)**

Type of feedback	Pre-Training	Post-Training	t	Significance
Rate Total Positive	1.474	2.407	-2.496	0.055
Rate Total Negative	0.827	0.212	3.208	0.24
Ratio +ve/-ve	1.875	14.083	-5.180	0.004

While the changes in the two types of feedback failed to reach statistical significance at the .05 level, when the changes in the two rates were expressed as a ratio, a level of significance at the .01 level was achieved.

The changes in the percentages of the various types of feedback are displayed in Table 34

**Table 34**

The percentage various types of verbal feedback used by junior teachers before and after training, pre-training proportions in brackets (n = 6)

Feedback	Positive	Negative
Work	71.9 (65.1)	3.3 (5.8)
Behaviour	19.4 (7.7)	5.3 (21.4)
Total	91.3 (72.8)	8.6 (27.2)

The changes in Junior teachers' behaviour were in a similar direction to that of their infant colleagues, a decrease in negative feedback and an increase in positive feedback. This similarity is even more striking when a comparison is made of the proportions of feedback given by both sets of teachers after training, which proved to be almost identical.

### Secondary

There was only a slight change in the rate of total feedback given by secondary teachers in the sample as a result of their training, a small reduction in the overall rate from 2.34 instances a minute to one of 2.11.

However there were changes in the type of feedback given, as outlined in table 35

**Table 35**

The changes in the rates and ratio given by secondary teachers as a result of the training (n=7)

Type of feedback	Pre-Training	Post-Training	t	Significance
Rate Total Positive	0.867	1.407	3.043	0.023
Rate Total Negative	1.475	0.701	2.007	0.092
Ratio +ve/-ve	1.149	3.319	2.606	0.040

The changes were all in the direction predicted. On face value the changes in secondary teachers behaviour appear not so great as was the case for primary teachers. However two of the changes for total positive and in the ratio of positive to negative were found to be significant at the .05 level. Changes in the percentages of feedback are given in table 36.

**Table 36**

**The percentage of types of verbal feedback used by secondary teachers before and after training. Pre training proportions in brackets n=7**

Feedback	Positive	Negative
Work	56.5 (30.1)	9.45 (14.9)
Behaviour	12.5 (5.6)	21.6 (54.8)
Total	69.0 (35.7)	31.1 (69.7)

These changes were again in the direction anticipated by the training. The proportions were different from the primary teachers, in that although there was a major reduction to about half the pre-training level in the levels of negative feedback, secondary teachers still maintained a rate of negative feedback for behaviour more than double that of their primary colleagues. Nevertheless in terms of total negative feedback before training this was at 69% while after training exactly the same proportion of feedback was of a positive nature.

## Group Vs Individual Feedback

The training contained the advice that one way of ensuring that every pupil in the class felt valued and that their behaviour or work was approved of by the teacher was to use forms of positive feedback directed to the group, rather than to rely on only individual feedback. For many teachers the rates of group feedback, especially before training was very low. Secondly as the rates of all types of feedback changed as a result of the training it was decided to report any changes in teachers use of group or individual feedback in terms of changes in the proportions that each type of feedback was used.

These changes for the whole of the sample are described in table 37.

**Table 37**

**The changes in percentages of group and individual feedback pre and post training (n = 19)**

Feedback	Individual Pre-Training	Individual Post-Training	Group Pre-Training	Group Post-Training
Positive	92.3	85.0	7.7	15
Negative	84.3	75.6	15.7	24.4

In all cases as a result of the training there appeared to be a shift in the nature of the type of feedback given by teachers in that a higher proportion of all types of feedback appear to be directed towards groups,

as suggested by the training. This is of course against a backdrop of increases in the use of all types of positive feedback and a drop in the rate of all forms of negative feedback.

Further similar changes were also apparent at the different types of school as is shown in tables 38,39 and 40.

**Table 38**

**The Changes in percentages of group and individual feedback given by Infant teachers before and after training (n = 6)**

Feedback	Individual Pre-Training	Individual Post-Training	Group Pre-Training	Group Post-Training
Positive	91	86	9	14
Negative	99	81	1	19

**Table 39**

**The Changes in percentages of group and individual feedback given by Junior teachers before and after training (n = 6)**

Feedback	Individual Pre-Training	Individual Post-Training	Group Pre-Training	Group Post-Training
Positive	91	84	9	16
Negative	79	76	21	24

**Table 40**

**The Changes in percentages of group and individual feedback given by Secondary teachers before and after training (n = 7)**

Feedback	Individual Pre-Training	Individual Post-Training	Group Pre-Training	Group Post-Training
Positive	95	85	5	15
Negative	75	70	25	30

It would appear that all teachers from the different stages of schooling responded to the training in a very similar fashion. Following training all teachers responded by directing a higher proportion of both positive and negative feedback towards groups rather than individuals.

### Use of Pupils Name

In the training teachers were encouraged to increase their use of pupils' name both in their use of positive and negative feedback, as it was argued such personal notification increased the likelihood of any such feedback resulting in change. The results are again reported in terms of proportions of feedback including a name, see table 41

**Table 41**

**Teachers use of pupils names in positive and negative feedback before and after training as expressed in percentages (n = 19)**

Type of School	Type of Feedback	Pre-Training	Post-Training	Percentage Change
Infant	Positive	19	15	-4
	Negative	34	22	-12
Junior	Positive	10	21.2	+11.2
	Negative	33.7	23.7	-10
Secondary	Positive	15.5	12.3	-3.2
	Negative	26	28.8	+2
Total	Positive	14.8	16.2	+1.4
	Negative	31.2	24.8	-6.4

These results present a picture of little change. The use of the pupils' name only represented a small aspect of the training. It does not appear that this aspect of the training had any effect on teachers' behaviour.

### Teachers' use of Description as part of Feedback

The training contained a section encouraging teachers both in their use of positive and negative feedback to describe the behaviour or work that was the subject of their approval or disapproval. The results of their changes in their use of descriptions is contained in Table 42, again in terms of proportions.

**Table 42**

**Teachers' verbal feedback that contained a description, before and after training as expressed in percentages (n = 19)**

Type of school	Type of feedback	Pre-Training Percentage	Post-Training Percentage	Change in Percentage
Infant	Positive	41	49.5	+8.5
	Negative	53	70	+23
Junior	Positive	17.6	9	-8.6
	Negative	25.5	53	+27.5
Secondary	Positive	37	49	+12
	Negative	17.9	22.5	+4.6
Total	Positive	31.8	35.8	+4
	Negative	35.8	48.5	+12.7



These results are largely in the direction expected as a result of the training. Most groups of teachers increased their use of descriptions for both positive and negative feedback. The only exception to this appeared to be junior teachers in their use of positive feedback. It is difficult to explain this phenomenon. It is noticeable that the largest change occurred in teachers' use of a description when providing negative feedback. This was especially apparent for primary teachers. Their use of descriptions when giving negative feedback increased by around 25%. This of course was in line with the training they were given. This contrasted with secondary teachers who only increased their use of descriptions when giving negative feedback by some 4%.

### **Teachers use of redirection following negative feedback, before and after training.**

In the training teachers were encouraged to include a redirection following use of negative feedback. The use of this element following negative feedback is reported in Table 43

**Table 43**

**The percentage of negative feedback that included use of redirection before and after training (n = 19)**

Type of School	Pre-Training including redirection	Post-Training Including redirection	Percentage Change
Infant	37.4	40.7	+3.3
Junior	30.6	76.8	+46.8
Secondary	34.9	39.6	+ 4.7
Total	34.3	52.4	+18.1

These results at all three types of school were in the direction expected as a result of the training. However the results showed only a small increase in the use of redirection for infant and secondary teachers but a large increase in junior teachers behaviour. It is difficult to account for these differences. What is clear that the training did result in an overall increase in the proportion of teachers' use of descriptions. It should also be borne in mind that this was against a background of an overall decrease in the rate at which teachers were giving all forms of negative feedback of over 30% (see Table 30).

## **Pupil Behaviour**

The teachers who took part in the training were observed teaching both before they took part in the training and then approximately four weeks after training. During these observations the behaviour of the pupils

in their classes was also observed in order to ascertain if the application of their new found skills had any influence on the behaviour of their pupils.

The changes in the pupil behaviour are presented in Table 44

**Table 44**

**The changes in percentages of on-task behaviour of pupils following the training of their teachers**

Type of school	Pre-Train On-Task	Post-Train On-task	Difference in On-task	t	Level of statistical significance
Infant N = 6	78.68	93.76	+15.08	-4.14	0.009
Junior N = 6	77.72	95.93	+18.21	-7.058	0.001
Secondary N = 7	76.23	92.68	+16.45	-3.284	0.017
Total N = 19	77.48	94.05	+16.57	-7.474	0.000

The changes in pupil on-task were all in the direction expected as a result of the training. These changes reached a level of significance for the overall sample and for the junior and infant sample at the 0.001 level sample and at the .05 level the secondary school sample.. This represents evidence of a shift in pupil behaviour as a result of their teachers' training.

## Types of off-task behaviour

In addition a record was made of the nature of the different types of off-task behaviour observed in all the classes both before and after the teachers' training. An account of these observations is given in Table 45.

**Table 45**

**The percentage of different types of off-task behaviour, for infant, junior and secondary pupils before and after their teachers' training. (Pre-Training percentages in brackets)**

Types of off-task behaviour	Infant N = 6	Junior N = 6	Secondary N = 7	Total N = 19
In-seat	0 (2.47)	0 (2.40)	1.23 (0.73)	0.41 (1.86)
Out of seat	2.13 (5.40)	0.3 (10.4)	0.3 (2.8)	0.91 (6.20)
Shouting	0.25 (0)	0 (0.1)	0 (0.34)	0.08 (0.15)
Talking	1.33 (4.51)	1.96 (5.82)	3.16 (9.15)	2.15 (6.48)
Disturb Pupils	0 (0.20)	0.25 (0.10)	0 (2.50)	0.08 (0.80)
Arguing	0 (0)	0 (0)	0 (0)	0 (0)
Distract Teacher	0 (0.1)	0 (0)	0 (2.1)	0 (0.49)
Inattentive	2.72 (6.95)	1.72 (6.7)	3.17 (6.38)	2.54 (6.68)

Some of these percentages are very small, so one must be cautious in interpreting them. However it would appear that some of the new skills employed by the teachers resulted a decline in virtually all types of off-task behaviour. The strategies appeared to be particularly effective in reducing rates of in-seat behaviour i.e. rocking on chair and turning

around, and especially out of seat behaviour, which showed a dramatic reduction, especially in the junior sample. There were also reductions by almost two thirds in pupils' most indulged in forms of off-task behaviour namely talking and inattention.

### **The relationship between changes in teachers' verbal feedback and the behaviour of pupils**

It is apparent that the teachers in this study responded to the training they were given, by changing various aspects of the way they provided verbal feedback to their pupils. There was no evidence that they were more or less inclined to use pupils' names when providing feedback. There was evidence that they were more inclined to provide feedback to groups rather than individuals and to use redirection following an admonishment. On the whole however changes in these elements of teachers' feedback are small, so it would be difficult to argue they had a major influence on pupil behaviour.

There was a major change however in the use of positive and negative feedback. These changes were substantial, both in terms of rates of feedback, but also in terms of the proportion of each type of feedback. The changes in the rates of the two key variables, rate of positive feedback and rates of negative feedback are outlined in Table 46. Of course in terms of the proportions of feedback, the changes in the proportions of positive

feedback and are mirrored by exactly similar proportional reductions in the percentage of negative feedback.

**Table 46**

**Changes in rates per minute of different types of feedback, proportion of positive feedback and on-task behaviour of pupils following teacher training**

Type of school	Changes in rates of +ve feedback	Changes in rates of -ve feedback	Changes in percentage of +ve feedback	Change in rate P/N	Changes in percentage of on-task rates of pupils
Infant N = 6	+1.014	- 0.406	+ 18.5	+ 12.857	+ 15.08
Junior N = 6	+ 0.933	- 0.615	+ 33.3	+ 12.208	+ 18.21
Secondary N = 7	+ 0.540	- 0.774	+ 29.4	+ 2.17	+ 16.15
Total N = 19	+ 0.813	- 0.607	+ 27.0	+ 7.61	+ 16.87

These changes in both the rate at which positive feedback was given, the ratio of positive to negative feedback and the overall increase in the percentage of all aspects of positive feedback appear to have resulted in increases in on-task behaviour that were observed in the classes after their teachers had received the training and after they began to use the strategies they had learned in their classrooms. The mean rates of on-task behaviour that were recorded in the classes after the teachers had had the training were all at a higher level than has been observed in other classes in either the United Kingdom or the U.S.A., Hong Kong, Australia and New Zealand. The only exception to this appears to be first school pupils reported by Charlton et al (1995) in a sample from St. Helena.

## **Summary of Results of the training study**

Changes were observed both in the behaviour of teachers and pupils following the training provided to the teachers. These changes can be summarised thus:

- 1) There was an increase in the rates at which all teachers provided positive feedback to their pupils and a decrease in their rates of negative feedback. Positive feedback for work increased from 48% to 68%, positive feedback for behaviour increased from 5% to 17%, while negative feedback for work was halved from 11% to 5% and negative feedback to behaviour was cut by a factor of four from 35% to 9%.
- 2) These changes in the rate of positive feedback were apparent in all types of teachers in the sample. The changes in secondary teachers behaviour was slightly less than their primary school colleagues.
- 3) Overall there was an increase in feedback directed towards groups. This was apparent in terms of both positive and negative feedback.
- 4) Overall there appeared to little change in the teachers' use of pupils' names as a result of the training.

- 5) Overall there were small increases in teachers' use of descriptions in their feedback. This increase was only small for positive feedback, 4%, but much higher in negative feedback, a 12% increase.
- 6) There was an increase of over 18% in the proportion of negative feedback that included a redirection.
- 7) There were significant changes in pupil behaviour following the training of their teachers. Mean on-task behaviour increased from 77.5% to 94%. These changes were evident in all age ranges in the study.
- 8) There were reductions in all types of off-task behaviour. Out of seat behaviour fell dramatically, from over 6% of all off-task behaviour to under 1%. There were less dramatic changes for other off-task behaviour; talking and inattention were both reduced from around 6% to 2%.

## **Discussion**

The main aim of the training programme was to provide teachers with strategies that would help improve the behaviour of pupils their classrooms. The training was primarily aimed at helping teachers improve their rates of approval and decrease their rates of disapproval. The results show that the programme successfully fulfilled that aim. Moreover, these changes in teacher behaviour were accompanied by marked increases in



the on-task behaviour of the pupils in those teachers' classes. These results show that these changes, together with other changes in other aspects of teacher feedback can be brought about as a result of a relatively brief training of teachers.

The study comprised only one pre-training and one post-training measure, therefore no long-term effect of the intervention can be established. However, as an increase in pupil on-task behaviour was experienced by all but one teacher in the sample, the only exception being a secondary teacher whose class had on-task rates before training of 97%, the case for all teachers to maintain their post-training rates of approval and disapproval is a strong one. It would have been valuable to conduct a follow-up investigation to see if the changed levels of feedback had been maintained. Such a refinement was not possible however because of the restraints of time and the school year. Any follow-up would have had to take place in another school year and that would have introduced too many confounding variables, not least of which would have been the fact that the teachers would have been teaching different classes.

Examination of the rates of approval and disapproval directed towards pupils' work and behaviour show that prior to training the majority of approval was directed towards academic work and disapproval was predominantly directed towards pupil behaviour. The intervention

dramatically changed that balance demonstrating overall approval rates directed towards behaviour increasing by some 300% (.13 to .39) and by some 64% (.95 to 1.56) for pupils' work. Similarly, total disapproval for social behaviour decreased by 35% (.77 to .27) of its pre-training level, whilst disapproval for pupils work decreased by 69%.

The overall effect of these changes was a fundamental shift in the pattern of teacher verbal behaviour. Most importantly, disapproval directed towards pupil behaviour was no longer the second most common form of verbal feedback, but was replaced by positive feedback for social behaviour, see Table 31, page 121. In terms of proportions of types of feedback the total proportion of positive feedback was 85% of all feedback given. It was this factor more than any other that is likely to account for the changes in pupil behaviour that were observed.

When the effects of the intervention on less central features of the investigation are considered, the changes in teacher behaviour are less dramatic and were not statistically significant. Following the training the proportions of both approval and disapproval directed to groups increased and hence the proportion directed to individuals decreased. but it is still evident that both approval and disapproval are primarily aimed at individuals rather than groups. Nevertheless, there is an indication here that approval/disapproval rates towards individuals and groups can be

changed. The point was made in the training was that approval directed towards groups was a good way of spreading the positive aspects of feedback to all in the class and of reminding them of class rules and instructions.

Teacher's use of pupils' names when providing feedback changed as results of the training, but again these changes were small. There was a small increase in the proportion of approvals, which included a name but a decrease in named disapprovals. This was surprising since teachers were encouraged to name pupils in both approval and disapproval. The increased proportion of naming following approval was marginal so it is difficult to ascertain whether this was due to the training. It is also difficult to account for the decrease in use of names following disapproval. The use of names was only a small part of the training. It is possible that with all the complexities that occur during the course of a lesson this aspect of the training was forgotten.

It should however be emphasised that whilst the use of proportions seems to be the most appropriate way of processing these data when considering the effectiveness of the training, in practice the rate at which feedback included pupils names shows a different picture. Although the proportion of naming with approval increased only marginally the mean frequency of naming doubled, due to the increased rate of approval.

Conversely the mean frequency of naming with disapproval fell to just less than a third of its pre-training level, because of the reduction in rates of disapproval. As a consequence, after training, the pupils' names were used much more in association with approval than with disapproval, whereas the reverse was true before training.

Some changes were also apparent in teacher's use of description as part of both approval and disapproval. It was noted that descriptions following disapproval increased rather more than teachers' use of descriptions as part of approval. Overall the proportion of disapproval that included a description increased by over 12% while descriptions as part of approval increased by only 4%. However there were considerable differences found between the response of the different teachers to the training. Infant and junior teachers managed to increase their proportions of negative feedback containing a description by 23% and 27.5% respectively. So that after training 70% of such feedback by infant teachers and 53% by junior teachers contained a description, while even after training only 22.5% of negative feedback by secondary teachers included a description.

The results of the training on teachers' use of redirection following disapproval were that the overall proportion of disapproval that included a redirection increased by some 18%. This took place against a backdrop of

falling rates of teachers' negative feedback. The degree of change was not however consistent between the teachers from different types of school. Most of the change was due to the major change found in teachers of junior pupils, who increased the proportion of disapproval including a redirection by almost 50%. The changes by other groups of teachers were negligible. There would appear to be no apparent reason for these differences, especially as the training for the junior teachers took place at exactly the same time as their infant colleagues.

The changes in teacher behaviour and consequent changes in pupil behaviour achieved in this study bear comparison with that achieved by others in the field, i.e. Harrop (1974), Merrett and Whedall (1980), Assertive Discipline, Swinson and Melling (1995) and Mayer (1995). It is worthy of note that while all these training packages vary in some aspects of their content and also in their style of presentation. Harrop's Behavioural Workshops, Merrett and Wheldall's 'Bat Pack' and Mayer's 'Constructive Discipline' were a series of workshops for teachers while the Canters' 'Assertive Discipline' was a very professional series of video presentations with a text book and work book. All these training packages involved at least six hours training presented either over a number of sessions or a whole day. In contrast the training in this study took only just over two hours to deliver. Consequently, it is therefore worth considering

the elements of the training used in this study which proved to make it so powerful.

There were three elements to the training given to the teachers were essential to its success. One element was similar to other programmes, but others were not.

Firstly the advice given to teachers was based very firmly on sound research in educational psychology. In this respect the training was no different from the others quoted above. It did allow the presenters to state to the teachers in the audience; 'we recommend you treat pupils in this way because we have sound evidence that if you do it will work! rather than a series of rather bland suggestions that teachers might like to try. In some ways this was the tone of the presentation. Teachers were given an opportunity to discuss how they might implement the strategies they had learned about, but there was little opportunity to debate whether or not it might or might not work.

Secondly at the beginning of the presentation teachers at each school were given a brief outline of their current use of verbal feedback, as recorded at the pre-training observation. Individual teachers were not identified. The findings were presented on a group basis. The results for each school were invariably similar, allowing the presenter to highlight the under use of positive feedback for behaviour and the over use of negative

feedback. Teachers were then given an opportunity to reflect upon their current performance and to discuss alternative strategies. It was these alternative strategies that became the main content of the course.

Thirdly every attempt was made to keep the content of the presentation as simple as possible. This was exemplified by the use of the '4 essential steps of classroom management' which formed the core of the presentation. Teachers appeared to understand its simple message and as the results at the post-training observations showed they were employing these strategies in their classrooms. Although the course did contain other levels of advice i.e. redirection following disapproval and the use of a technique called proximity praise these did not appear to have been incorporated into teachers practice to the extent that other more basic advice proved to be.

## References

- AXELROD, S. (1977). *Behaviour Modification for the Classroom Teacher*. New York. McGraw-Hill Book Co.
- BARLOW, D & HERSEN, M. (1984) *Single Case Experimental Designs* Oxford: Pergamon Press.
- BEAUMAN, R. & WHELDALL, K. (2000). Teachers' Use of Approval and Disapproval in Classrooms, *Educational Psychology* 20(4). 431-446.
- BECKER, H. (1963). *Outsiders : Studies in the Sociology of Deviance*, New York : Free Press
- BENNETT, S.N., (1978). Recent research on teaching : a dream, a belief and a model, *Educational Psychology*, 48, 127-147.
- BENNETT, S.N., (1976). *Teaching Styles and Pupil Progress*, London: Open Books.
- BIJOU, S.W. (1965) Experimental studies of child behaviour, normal and deviant. In Kasner and Ullman (Eds) *Research in Behaviour Modification*, New York. Holt, Rinehart & Winston.
- BROPHY, J. (1981). Teacher praise : a functional analysis. *Review of Educational Research*, 51 5-32,
- BROWN, D. & Peddler, J. (1979). *Introduction to Psychotherapy*, London : Tavistock Publications.
- CANTER, L. & CANTER, M. (1992). *Assertive Discipline : Positive Behaviour Management for Today's Classrooms*. Santa Monica: Lee Canter Associates.
- CHARLTON, T., LOVEMORE, T., ESSEX, C. & CROWIE, B. (1995). Naturalistic rates of teacher approval and disapproval and on-task behaviour in first and middle school classrooms in St Helena. *Journal of Social Behaviour and Personality*, 10, 817-826.
- CHERRY, E.D. (1953). Some experiments on the recognition of speech with one or two ears. *Journal of the Acoustical Society of America*, 25, 975-9.
- COHEN, J. (1993). *The World Tonight*, BBC Radio 4, 11/6/93.
- COHEN, J. (1960). A co-efficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- COOPER, J.O., HERON, T.L., and HEWARD, W.L. (1987). *Applied Behaviour Analysis*, Columbus OH: Merrill.
- COOPER, P. & UPTON, G. (1990). An ecosystemic approach to emotional and behavioural difficulties in school. *Educational Psychology* 10(4), 301-321.



- CORRIE, L. (1997). *The Interaction between Teachers' Knowledge and Skills when Managing a Troublesome Classroom Behaviour*, Cambridge Journal of Education, 27(1), 93-105.
- DAVIE, R. (1993). 'Assessing and understanding children's behaviour' in *Managing Misbehaviour in Schools*, ed Charton, T. and David, K, Routledge. LONDON.
- DENSCOMBE, M. (1980). *Keeping 'em quiet : the significance of noise for the practical activity of teaching*. In Woods, P., (ed). *Teacher Strategies*, London: Croom Helm.
- DEPARTMENT FOR EDUCATION & SCIENCE, (1989). *Discipline in Schools (The Elton Report)* London: H.M.S.O.
- DINKMEYER, D. & DREIKURS (1963). *Encouraging children to learn : the encouragement process*. Prentice Hall, Englewood Cliffs N.J.
- DWECK, C., DAVIDSON, W., NELSON, S., and ENNA, B. Sex differences in learned helplessness. *Developmental Psychology* 14<sup>th</sup> ed. 268-276.
- FAUPEL, A.W. (1990). A model response to emotional and behavioural development in schools. *Educational Psychology in Practice* 5(4), 172-182
- FITZ-GIBBON, C.T. & CLARK, K.S. (1982). Time variables in classroom research : a study of eight urban secondary school mathematics classes. *British Journal of Educational Psychology*, 52, 301-316.
- FRANKLAND, S., PITCHFORD. Y. & PITCHFORD, M. (1985). The use of video recording to provide repeated monitoring of the successful use of roles, praise and ignoring. *Behavioural Approaches with Children*, 9. 67-68.
- FREDERICKSON, N., (2002). Evidence-based practice and educational psychology. *Educational and Child Psychology* 19 (3) 96-111.
- FRY, P.S., (1983). Process measures of problem and non-problem children's classroom behaviour : the influence of teacher behaviour variables. *British Journal of Educational Psychology*, 53, 79-88.
- GALTON, M., SIMON, B. & CROLL, P. (1980). *Inside the Primary Classroom*. London, Routledge & Keegan Paul.
- GALVIN, P., MERCER, S. & COSTA, P. (1990). *Building a Better Behaved School*, Longman York.
- GARRITY, K., and DEGELMAN, D., (1990). Effect of server introduction on restaurant tipping. *Journal of Applied Social Psychology* 20, 2. 168-172.
- GILCHRIST, E.P. (1916). The extent to which praise and reproof affect a pupil's work. *School Society*, 4, 872-874.
- GILHAM, W.E.C. (1978) (ed), *Reconstructing Educational Psychology*. London: Croom Helm.
- GILHAM, W.E.C. (1981) *Problem Behaviour in Secondary Schools*. London: Croom Helm.

- GLASSER, W. (1992) *The quality school: Managing students without coercion*. 2<sup>nd</sup> edition Harper Perennial, New York
- GRAY, J. & SIME, J. (1988). Findings from National Survey of Teachers in England and Wales in "Elton Report" *Discipline in School*. DES. (1989)
- HANKO, G. (1993). The right to teach – but what are Lee Canter's children learning? *British Journal of Special Education* 20(2) 71-85.
- HARGREAVES, D.H., HESTER, S.K. AND MELLOR, F.J. (1975) *Deviance in Classrooms*. London : Routledge.
- HARRIS, A., and KAPHE, R., C1978. Problems of quality control in the development and use of behavioural change techniques in public school settings. *Education and treatment of children* 1 p43-51.
- HARROP, L.A. (1974). A behavioural workshop for the management of classroom behaviour. *British Journal of In-Service Education*, Vol. 1, No.1.
- HARROP, L.A., (1974). A Behavioural Workshop for the Management of Classroom Problems *British Journal of In-Service Education*, 1 (1) 47-50.
- HARROP, L.A., (1978) Another Gain for the Modifiers. *Special Education Forward Trends* 5 (1). 15-17
- HARROP, L.A., (1980). Behaviour Modification in schools: A time for caution. *Bulletin of the British Psychological Society* 33, 158-160.
- HARROP, A., (1983). Behaviour Modification in the Classroom. London: Hodder & Stoughton.
- HARROP, A., DANIELS, M. AND FOULKES, C. (1990). The use of momentary time sampling and partial interval recording in behavioural research. *Behavioural Psychotherapy*, 18, 121-127.
- HARROP, A. & SWINSON, J. (2000) Natural rates of approval and disapproval in British infant, junior and secondary classrooms *British Journal of Educational Psychology* 70 473-483.
- HARROP, A. & SWINSON, J. (2003) Teachers' Questions in the Infant, Junior and Secondary School. *Educational Studies* 29 (1) 49-57
- HATHAWALA-WARD, H. & SWINSON, J. (1991). Teachers' verbal responses in a multi-racial primary school. *Educational & Child Psychology* 16(3), 37-43.
- HELLER, M. & WHITE, M. (1975). Rates of teacher approval and disapproval to higher and lower ability classes. *Journal of Educational Psychology*, 67 796-800.
- HENRY, S. (ed) (1989). *Degrees of Deviance : Student Accounts of their deviant behaviour*. Aldershot : Aveburg Gower.
- HOUGHTON, S., WHELDALL, K., JUKES, R. & SHARPE, A. (1990). The effects of limited private reprimands and increased private praise on

- classroom behaviour in four British secondary school classes. *British Journal of Educational Psychology*, 60, 255-26.
- JOLLY, M. & McNAMARA, E., (1992). *Pupil Behaviour Schedule Towards Better Behaviour*. Ainsdale.
- KENT, R.N., KANOWITZ, J., O'LEARY, K.D. & CHEIKEN, M. (1977). Observer reliability as a function of circumstances of assessment. *Journal of Applied Behaviour Analysis*, 10, 317-324.
- KOUNIN, J.S., (1970). *Discipline and Group Management in Classrooms*. New York. Rinehart & Winston Inc.
- KOUNIN, J.S., GUMP, P.V., and RYAN, J.J., (1961). Explorations in Classroom Management. *Journal of Teacher Education* 12. 235-247.
- KOUNIN, J. AND GUMP, P. (1958). The ripple effect in discipline. *Elementary School Journal* 59. 158-62.
- KUPLAN, J.S. & CARTER, J. (1995). *Beyond behaviour modification : a cognitive behavioural approach to behaviour management in the school*. Pro-Ed Austin, Texas, USA.
- KYRIACOU, C. (1986). *Effective Teaching in Schools*. Oxford Basil Blackwell.
- LEPPER, M.R., and GREENE, D. (1978). The Hidden Costs of Reward. *Morriston New Jersey, Lawrence Earlbaum*.
- LEPPER, M.R., and GREEN, D., and NESBITT, R.E., (1973). Understanding Children's intrinsic interest with extrinsic reward. *Journal of Personality and Social Psychology* 28, 129-137.
- LEWIN, K. (1935). *Dynamic Theory of Personality*. Selected Papers. New York. McGraw-Hill.
- McALLISTER, L.W., STACHOWIAK, J.G., BEAR, D.M. & CONDERMAN, L. (1969). The application of operant conditioning techniques in a secondary classroom. *Journal of Applied Behaviour Analysis*, 2, 277-285.
- McCORMICK, S.L. (1985). Students' off-task behaviour and Assertive Discipline. *Dissertation Abstracts International*, 46, 1880A.
- McCOLL, L. & FARRELL, P. (1990). Method used by educational psychologists to assess children with emotional and behavioural difficulties. *Educational Psychology in Practice*, 9(3), 164-169.
- McNAMARA, E., EVANS, M. AND HILL, W. (1986). The reduction of disruptive behaviour in two secondary school classes. *British Journal of Educational Psychology*, 56, 209-215.
- McNAMARA, E. & HEARD, A. (1976). Self control through self recording. *Special Education: Forward Trends* 3, 157-168.
- MADSEN, C.H., BECKER, W.C. & Thomas, D.R. (1968). Rules, praise and ignoring elements of elementary classroom control. *Journal of Applied Behaviour Analysis* 1,(2), 139-50.

- MAGEEAN, B., (2002). The evidence of psychology in action. *Educational and Child Psychology* 19 (3), 22-31.
- MAKINS, V. (1991). Five steps to peace in the classroom. *Times Educational Supplement*, 1/11/91.
- MANDLEBAUM, L.H., RUSSELL, S.C., KROUSE, J. & GONTER, M. (1983). Assertive Discipline : an effective classwide management program. *Behaviour Disorders*, 8, 258-264.
- MARZILLER, J. (2004). The myth of evidence-based psychotherapy. *The Psychologist* 17 7 392-395.
- MAYER, G.M. (1995). Preventing anti-social behaviour in the schools. *Journal of Applied Behaviour Analysis*, 28, 467-478.
- MAYER, G.R. & BUTTERWORTH, T. (1979). A preventative approach to school violence and vandalism : An experimental study. *Personal and Guidance Journal*, 57, 436-441.
- MAYER, G.R., BUTTERWORTH, T. , NAFFAKTITIS, M. & SULZER-AZAROFF, B. (1983). Preventing school vandalism and improving discipline : A three-year study. *Journal of Applied Behavioural Analysis*, 16, 355-369.
- MERRETT, F. & BLUNDELL, D. (1982). Self-recording as a means of improving classroom behaviour in secondary school. *Educational Psychology* 2, 145-157.
- MERRETT, F., JACKSON, P. & FITZPATRICK, A. (1991). The effect of changes in teacher response ratios on pupils' behaviour. *Positive Teaching*, 2, (2), 79-91.
- MERRETT, F. & WHEDALL, K. (1986). Observing pupil and teachers in classrooms (OPTIC) : A behavioural observation schedule for use in schools. *Educational Psychology*, 6, 57-70.
- MERRETT, F. & WHEDALL, K. (1987). Natural rates of teacher approval and disapproval in British primary and middle school classrooms. *British Journal of Educational Psychology*, 57, 95-103.
- MILLER, A. (2003) Teachers, Parents and Classroom Behaviour. A Psychosocial Approach. Maidenhead: Open University Press
- MYER, G.R. & BUTTERWORTH, T. (1979). A preventative approach to school violence and vandalism : An experimental study. *Personnel and Guidance Journal*, 57, 436-441.
- MYER, W., and LINDSTROM, D., (1969). The distribution of teacher approval and disapproval of Head Start children. (Find Report, Contact No. OEO-4120): *United States Office of Economic Opportunity*.
- NAFFAKTITIS, M., MAYER, G.R. & BUTTERWORTH, T. (1985). Natural rates of teacher approval and disapproval and their relation to student

- behaviour in intermediate school classrooms. *Journal of Educational Psychology*, 77, 363-367.
- NAU, P.A., VAN HOTEN, R. & O'NEIL, A. (1981). The effects of feedback and a principal – mediated time-out procedure on the disruptive behaviour of junior high school students. *Education and Treatment of Children* 4(2), 101-113.
- NICHOLS, D. & HOUGHTON, S. (1995). The effect of Canter's Assertive Discipline Programme on teacher and student behaviour. *British Journal of Educational Psychology*, 65, 197-210.
- O'DONOHUE, W. & KRASNER, L. (1995). *Theories of Behaviour Therapy*, American Psychological Association, Washington, DC.
- O'LEARY, K.D. & O'LEARY, S.G. (1972). *Classroom Management the Successful Use of Behaviour Modification*. Oxford: Pergamon Press.
- PATERSON, G.R. & REID, J.B. (1971). Reciprocity and coercion : two facets of social systems. In *Neuringer, C. & Michael, J. (Eds) Behaviour Modification in Clinical Psychology – New York*. Apple-Century-Crofts.
- PHILLIPS, D., DAVIE, R. & CULLELY, E. (1985). Pathway to institutional developments in secondary schools in Reynolds D (ed) *Studying School Effectiveness*, London : Fulmer Press.
- RAYMOND, J. (1987). An educational psychologist's interaction with a class of disruptive pupils. *Educational Psychology in Practice*, 3,(2), 16-22.
- REES, C., FARRELL, P. & REES, P. (2003). Coping with complexity : how do Educational Psychologists assess students with emotional and behavioural difficulties. *Educational Psychology in Practice*, 19,1, 35-64.
- REYNOLDS, D. (1992). School effectiveness and school improvement : an updated review of British literature, in D. Reynolds & P Cattance (eds) *School Effectiveness : Research, Policy and Practice* London : Cassell.
- RHODES, J. (1993). The use of solution-focus brief therapy in school. *Educational Psychology in Practice* 9(1), 27-34.
- RODGERS, B. (1998). *You know the fair rule*. Melbourne: ACER.
- RODGERS, T.A., and IWATA,, B.A., (1991). An analysis of error-correction procedures during discrimination training. *Journal of Applied Behaviour Analysis* 24, 775-782
- ROMANCZYK, R.G., KENT, R.N., DIAMENT, C., and O'LEARY, K.D., (1973). Measuring the reliability of observational data: a reactive process. *Journal of Applied Behaviour Analysis*, 6. 175-185.
- ROSENSHINE, B. (1971). *Teaching Behaviours and Student Achievement*. N.F.E.R., Slough.
- RUSSELL, A. & LIN, L.G. (1977). Teacher attention and classroom behaviour. *The Exceptional Child*, 24, 148-155.

- RUTTER, M., MAUGHAN, B., MORTIMORE, P. & OUSTON, J. (1979). *Fifteen Thousand Hours : Secondary Schools and Their Effects on Children*. London. Open Books.
- SCHWIESO, J. & HASTINGS, N. (1987). Teachers use of approval in N. Hastings & J. Schwieso (Eds) *New Directions in Educational Psychology, Vol. 2, behaviour and motivation in the classroom*, 115-136. London, Falmer.
- SCOTT, L., McNAMARA, E. AND McPHERSON, E. (1986). The use of behaviour modification in a secondary school : A further development. *Educational and Child Psychology, 3*, 4-20.
- SHERMAN, T.M. & CORMIER, W.H. (1974). An investigation of the influence of student behaviour on teacher behaviour. *Journal of Applied Behaviour Analysis, 7*, 11-21.
- SKINNER, B.F., (1938). The behaviour of organisms. *New York, Appleton-Century-Crofts*.
- SKINNER, B.F., (1953). Science and Human Behaviour. *New York, Macmillan*
- SKINNER, B.F., (1968) The technology of Teaching. *New York: Appleton Century Crofts*.
- SIDMAN, M. (1960). *Tactics of Scientific Research – Evaluating Experimental Data in Psychology*. New York. Basic Books.
- SOMMER, R. & SOMMER, B. (2002). *A practical guide to Behavioural Research 5<sup>th</sup> edition*. O.U.P. Oxford.
- STOIBER, K.C., and WAAS, G.A., (2002). A contextual and methodological perspective on the evidence-based intervention movement with school psychology in the United States. *Educational and Child Psychology 19 (3)*. 7-21.
- STRAIN, P.S., LAMBERT, D.L., KERR, M.M., STAGG, V. & LENKER, D.A. (1983). Naturalistic assessment of children's compliance to teachers' requests and consequences for compliance. *Journal of Applied Behaviour Analysis 16*, 243-249.
- SQUIRES, G. (1996). *The long term effects of Assertive Discipline*. Unpublished M.Ed. thesis University of Manchester.
- SUTHERLAND, S. (1992). *Irrationality the Enemy Within*. Harmsworth: Penguin.
- SWINSON, J. (1990). Improving behaviour : A whole-class approach using pupil perceptions and social skills training. *Educational Psychology in Practice, 6(2)*, 82-89.
- SWINSON, J. & CORDING, M. (2002). Assertive discipline in a school for pupils with emotional and behavioural difficulties. *British Journal of Special Education, 29(3)*, 72-75.

- SWINSON, J & HARROP, A (2002) The Differential Effects of Teacher Approval and Disapproval in Junior and Infant Classrooms. *Educational Psychology in Practice* 17 (2) 157-167
- SWINSON, J. & MELLING, R. (1995). Assertive Discipline – four wheels on this wagon – a reply to Robinson and Maines. *Educational Psychology in Practice*, 11(3) 1-8.
- SWINSON, J., WOOF, C & MELLING, R. (2003) Including Emotional and Behaviour Difficulties Pupils in Mainstream Comprehensive. *Educational Psychology in Practice* 19 (1) 65-75
- THARP, R.G. & WETZEL, R.J. (1969). *Behaviour modification in the natural environment*. New York. Academic Press.
- THOMAS, J.D., PRESLAND, I.E., GRANT, M.D. & GLYNN, T. (1978). National rates of teacher approval and disapproval in grade 7 classrooms. *Journal of Applied Behaviour Analysis*, 11(1) 91-94.
- THORNDIKE, E.L. (1898). *Animal Intelligence*. Psychol. Rev. Monogr., Supplement No. 2.
- TOPPING, K. (1980). *Educational Systems for Disruptive Adolescents*. London: Croom Helm.
- TORGERSON, D. & TORGERSON, J. Randomised Control Trials in Educational Research. *British Journal of Educational Studies* 49(3) 13-25.
- TUNSTALL, P. & GIBBS, C. (1996). How does your teacher help you to make your work better? Children's understanding of formative assessment. *The Curriculum Journal*, 7, (2), 185-203.
- VISSER, J. (1983). The humanistic approach in Upton, G. & Gobell, A. (eds) *Behaviour Problems in a Comprehensive School*, Cardiff Faculty of Education, University College.
- WARD, J. (1976). Behaviour modification in education : an overview and a model for programme implementation. *Bulletin of the British Psychological Society*, 29, 257-268.
- WARD, L. (1983). An evaluation of Assertive Discipline as a means of reducing classroom disruptions. *Dissertation Abstracts* 44(2141A) *Doctoral Dissertations*. Texas Technological University.
- WARD, L. (1984). The effectiveness of Assertive Discipline as a means to reduce classroom disruptions. *Dissertation Abstracts International*, 44, 2323A.
- WATSON, J.B. (1913). Psychology as the Behaviourist Views It. *Psychological Rev.*, 20, 158-177.
- WHELDALL, K. & AUSTIN, R. (1980). Successful behaviour modification in secondary school – a reply to McNamara & Harrop. *British Psychology*

- Society Division of Educational & Child Psychology Occasional Papers, 4(3), 3-9.*
- WHELDALL, K. & BEAMAN, R. (1994). An evaluation of the WINS (Working Ideas for Need Satisfaction), training package, *Collected Original Resources in Education 18(1) fich4E01.*
- WHELDALL, K., HOUGHTON, S. & MERRETT, F. (1989). Natural rates of teacher approval and disapproval in British secondary school classrooms. *British Journal of Educational Psychology, 59, 38-48.*
- WHELDALL, F., HOUGHTON, S., MERRETT, F. & BADDELEY, A. (1989). The Behavioural Approach to Teaching Secondary Aged Children (BATSAC). Two behavioural evaluations of a training package for secondary school teachers in classroom behavioural management. *Educational Psychology, 9(3), 185-196.*
- WHELDALL, K. & MERRETT, F. (1986). Reducing troublesome classroom behaviour in the secondary school. *Maladjusted and Therapeutic Education, 3(2), 37-46.*
- WHELDALL, K. & MERRETT, F. (1987). *What is the behavioural approach to teaching?* In Hartings, N & Schwiesco, J. (Eds) *New Directions in Educational Psychology II : Behaviour and Motivation in the classroom.* London: Falmer.
- WHELDALL, K. & MERRETT, F. (1988). Packages for Training Teachers in Behaviour Management. BATPACK., BATSAC and the Positive Teaching Packages. *Support for Learning 3, 86-92.*
- WHELDALL, K., MERRETT, F. & BORG, M. (1985). The behavioural approach to teaching package (BATPACK) and experimental evaluation. *British Journal of Educational Psychology, 55, 65-75.*
- WILSON, C.W. & HOPKINS, B.L. (1973). The effects of contingent music on the intensity of noise in junior high home economic classes. *Journal of Applied Behaviour Analysis, 6, 269-275.*
- WINTER, S. (1990). Teacher approval and disapproval in Hong Kong secondary school classrooms. *British Journal of Educational Psychology, 60, 88-92.*
- WHITE, M.A. (1975). Natural rates of teacher approval and disapproval in the classroom. *Journal of Applied Behaviour Analysis, 3, 367-372.*
- WOLF, M.M., GILES, D.K. & HALL, V.R. (1968). Experiments with token reinforcement in a remedial classroom. *Behaviour Research and Therapy 6, p51-64.*
- WOODS, S., HODGES, C. & ALJUNIED, M. (1996). The effectiveness of Assertive Discipline training, look before you leap of this wagon. *Educational Psychology in Practice, 12(3), 175-181.*



WOODS, P. (1979). *The Divided School*. London: Routledge and Keagan Paul.

WYATT, W.J. AND HAWKINS, R.P. (1987). Rates of teachers' verbal approval and disapproval. *Behaviour Modification*, 11(1), 27-51.

## **Chapter 4**

### **General Discussion**

The results of the survey of teachers' current use of verbal feedback and results of the training study have already been discussed at the end of chapters 2 and 3. There are a number of theoretical issues that arise from both studies that are worthy of further consideration. In addition the implications of these studies for teachers, teacher trainers, educational psychologists, schools and indeed the pupils themselves needs to be discussed, as does the implications of these studies for future research.

### **Theoretical Considerations**

It is important to consider the results of this investigation from a theoretical perspective. The influence that teacher feedback has upon the behaviour of pupils in classes has long been established. This research adds further weight to that evidence. Most educational psychologist and indeed other sources of advice to teachers stress the value that teacher praise, approval or acknowledgement has on reinforcing good behaviour or learning. This would appear to be an accurate description of social reinforcement theory i.e. that praise, approval or acknowledgement following any activity will increase the likelihood that such behaviour will reoccur in similar circumstances.

In Chapter 1, consideration was given to a range of theoretical approaches that had been used to explain pupil behaviour in classrooms. The main theoretic paradigm used in this study was in terms of social learning theory. However the results of this study can be seen from a number of other perspectives. A good example is that both the humanist theory and the psychodynamic theories of Adler have placed great importance on the role that self-esteem has on behaviour and the role that teachers have of developing positive relationships with their pupils. It is clear in this study that by encouraging teachers to increase their positive feedback to their pupils positive rather than hostile relationship are more likely to be developed. Furthermore as the research of Harrop (1983) as shown such approaches can lead to increases in measured self-esteem.

From an ecosystemic perspective it is clear that the classroom environment is very changed once the class teacher has been trained and has adopted positive based strategies outlined in this study into their practice. The most important changes would appear to be not only in terms of teacher behaviour but also in the improved behaviour of the rest of the class. Clearly in ecosystemic theory these are important changes. Similarly from the perspective of system theory, it could be argued that that by training teachers to use positive strategies they may not have considered or used previously the product is a very different pattern of behaviour in the classroom.

These different theoretical positions can provide an added insight into the changes that were observed in the classes after the teachers were trained

and had adopted positive strategies. They do not detract from the original paradigm used in this study which is positivistic and based on empirical based social learning theory.

Brophy (1981) has questioned this position. Her examination is based on her analysis of the effect of praise. Praise she argues is often infrequent, often not contingent, and often not specific and may lack credibility with pupils. Her position is supported from a number of sources. Naspaktitis et al (1985) also noted the lack of contingency of a great deal of teacher approval. Sutherland (1992) and Hanks (1993) have questioned the assumption that the attention given to pupils of all ages implicit in teacher's use of praise is always reinforcing.

It is however important to differentiate between praise as defined by Brophy which was limited to a specific range of key phrases such as 'good' 'well done' and the behaviour-linked definition of positive verbal feedback used in this study. Considerable time was spent in developing the definitions used in this study, see appendix 4. This study included in its definition verbal feedback such as 'right', 'OK', and 'correct' which although not defined as praise in Brophy's terms, were regarded as a public acknowledgement of the behaviour that the teacher wished to encourage. The use of a broader definition of approval as used in this study which included all forms of approval and acknowledgement may go some way to address the concerns of

Sutherland (1992) and Hanks (1993) who both suggest that effusive praise can be counter productive.

Brophy's concern of the lack of contingency of teachers' use of praise is hard to answer. Brophy (1981) herself only cites two papers, Harris and Kaphe (1978) and Meyer and Lindstrom (1969) who have raised this issue. Other investigators in this area do not appear to see contingency as a problem. Certainly it did not appear as an issue in this study in that the definition used precluded anything other than contingent approval and in fact during the classroom observation the vast majority of verbal feedback appeared to be appropriately directed and timed. This may have been a reflection of the care taken to derive the precise definitions of both positive and negative feedback, which in this study precluded any non-contingent feedback. The issue of contingency is an interesting one but it was beyond the scope of this study and one that could not have been investigated without video recording of lessons.

Brophy also raises the issue of reciprocity alluded to before. She points out that higher rates of praise by teachers may be an outcome of better pupil behaviour. This interpretation, that pupil behaviour may sometimes determine teacher behaviour is not new. Sherman and Cormier (1974) demonstrated that increases in levels of appropriate behaviour by pupils brought about by independent means, resulted in higher rates of positive

responses by the teacher. Patterson and Reid (1971) explained this phenomenon in terms of reciprocity theory, which lends support to both Sherman and Cormier' view and that of Brophy. It predicts that teacher behaviour should change as pupil behaviour changes. A view that is also compatible with that of Tharp and Wetzel (1969) who conceptualised all social interactions in terms of two-way reinforcement. While this hypothesis of course may account for some aspects of teacher verbal feedback, its portrayal of teachers as passive responders to pupil behaviour is not one that most teachers would recognise.

Furthermore while such an interpretation may have value in explaining some aspects of the original survey of teachers' use of feedback and the Phase 1 results, it cannot offer an interpretation of the results of the training study. In Phase 2 when teachers were asked to take a proactive lead and increase the level at which they provided positive feedback to the class then pupil behaviour improved. Reciprocity theory does however provide encouragement for the long-term effectiveness of the training. If teachers do respond positively to the improved behaviour of their pupils by sustaining high levels of approval then in theory the good conduct of lessons should last for ever!

Similarly most teachers would not recognise any description of their pupils as passive receivers of feedback, waiting to be moulded into perfect students. Children by their very nature are lively inquisitive individuals. In a school classroom they may need guidance in order to establish the routines

and behaviour so that learning can take place. The clear message of this research is that this can be achieved through positive approaches. In theory once engaged, children, in a well-planned lesson, can begin to appreciate the intrinsic reward of learning a new skill or being engaged in an exciting activity. Clearly such intrinsic reward is only available to the pupils once they begin the activity. According to this research to achieve such engagement a praised-based strategy would appear to be very effective method.

Despite her reservations over the effectiveness of praise as a reinforcer Brophy (1981) does acknowledge that, (page 21)

*“...most students enjoy receiving (genuine) praise, and most teachers enjoy praising. Effective praise can provide encouragement and support when made contingent on effort, can be informative as well as reinforcing when it directs students’ attention to genuine progress or accomplishment.”*

She also suggests that it is important to consider the role of praise in terms of attribution theory. Pupils’ perception of praise in terms of whether they felt it was genuine or appropriate could affect the way they perceived themselves. She cites work by Meyer et al (1979) in support of this. However Myers’ study was not based on classroom observation but on pupils’ responses to series of vignettes rather than an analysis of pupils’ perceptions as a result of their treatment in class. As a result the finding should be treated with caution. She also cites Dweck et al (1978) who found that pupils tended to undervalue praise if they were over praised for doing simple work and that

appeared to have an effect on their self-perception. This work is not dissimilar from that of Lepper and Green (1978), who in a classic study found that when very young children were over rewarded for a painting task, performance deteriorated, Lepper, Green and Nisbett (1973). Indeed a review by Pressley and McCormick (1995) concluded that it is only where praise is linked to a naturally reinforcing element of the lesson that it has not been able to demonstrate its effectiveness.

Clearly there is a relationship between not only teachers' use of positive feedback and pupils' behaviour but also between feedback and how pupils perceive themselves and the tasks they have been asked to do. While Brophy rightly draws attention to the limitations and potential difficulties that can arise from over or indiscriminate use of praise, it is important to also consider some of the additional benefits that use of positive strategies in classrooms can bring. For instance a study reported by Harrop (1983) seems to indicate that appropriate feedback from teachers to junior schools children, far from having a detrimental effect on pupils can lead to changes in pupils' measured self esteem.

Perhaps Brophy is also being over cautious in her concerns over indiscriminate over use of praise. The results of this research show that certainly before teachers were trained very few were in danger of an over use of positive feedback. Indeed when pupils are asked of their perceptions of



teachers, most complained that they did not get praised enough, (Raymond 1987; Swinson, 1990).

## **Implications for teachers, teacher trainers, educational psychologist, schools and pupils**

### **Teachers**

The overwhelming majority of teachers prefer well ordered lessons that allow them to teach and pupils to learn. They do not like their lessons interrupted by ill-disciplined pupils or the tedium of having to fill numerous report sheets if the point is reached where they have to send a pupil out of the class. The evidence from this study suggests that if teachers are made aware of the necessary skills and techniques and apply those skills in their classrooms, then there is likely to be a marked improvement in the behaviour of all their pupils. It may be the case that teachers already have these skills in their repertoire but need to be aware of their vital importance in classroom management. Whatever the case, the evidence is that teachers can learn about these skills and can apply them after only two to three hours of training which in turn leads to a marked improvement in pupil behaviour.

The benefits in terms of improved pupil learning, less teacher stress and improved attitudes to work were not part of this study but had they been it seems highly probable that they would have resulted in positive outcomes.

### Teacher Trainers

The implications for the trainers of teachers are very clear. Classroom management is a central skill in all teachers training. As has been shown in this study a key element in such management is both the quality, in terms of descriptions, use of name and redirection and quantity of teachers' use of verbal feedback. It also been demonstrated that the utilisation of the skills of effective verbal feedback can be quickly and simply taught as In-service training. The extent to which such skills would be as effectively taught as part of initial teacher training or whether it would have the same impact on pupil behaviour is beyond the scope of this investigation. This could be part of a future research. What is clear is that such skills are important elements of good classroom practice and therefore should be taught as part of all teachers training.

## Educational Psychologists

Approximately half the referrals made to educational psychologists primarily concern pupils' behaviour. These referrals may take considerable time to deal with and as McColl and Farrell (1990) report in many cases lead transfer to other unit or schools. Such provision is invariably more expensive than mainstream school and as Topping (1980) makes clear may not lead to any improvement in behaviour.

Interventions such as the one described in this study can lead to improvements in behaviour for all pupils, including those who may have been previously identified as being at risk. As Swinson, Woof and Melling (2003) have demonstrated when the behaviour of the whole class is good, and then this has a knock-on effect on pupils who had been previously assessed as being EBD (Emotional and Behavioural Difficulties). Thus training such as described in this study would save money in reducing time spent on assessment, time devising intervention strategies and in formal assessment. It would also give educational psychologist an opportunity to pursue the type of whole school intervention strategies envisaged by Bob Burden, twenty five years ago, in his contribution to 'Reconstructing Educational Psychology', Gillham (1978).

## Schools

The implication for schools is three fold. All schools are under pressure from the government, local authorities and parents to raise standards. Standards can only rise if the standard of teaching in classrooms is improved. This study shows one way in which, if teaching skills are improved; standards of behaviour can be shown to be improved. This improved behaviour is likely to be reflected in improved pupils learning

The second major pressure on schools is to become more inclusive, to reduce the number of fixed term and permanent exclusion and to send fewer pupils to specialist schools or units (Excellence in Education 1997, DfES White Paper). This study shows one way in which schools can improve teacher skills and thereby improve the way in which they treat all pupils including those with challenging behaviour.

Thirdly schools may benefit financially, as Meyer (1995) reports the costs of vandalism fell by over 57% in elementary schools that were trained to use his 'Constructive Discipline' programme, Mayer and Butterworth (1979). Even greater savings were estimated for junior high schools.

## Pupils

Pupils prefer well ordered classes and contrary to some teachers assumptions usually like to be allowed to get on with their work without interruptions from other unruly pupils (see Swinson, 1990). The training outlined in this study provides the pupils' teachers with the skills to allow this workman like atmosphere to be generated in all classrooms. Secondly as has been indicated above in this type of atmosphere pupils are increasingly likely be able to concentrate on their work and likely to achieve.

## Implications for future research

Education has been criticised for its lack of evidence-based practice, Torgerson and Torgerson (2001). Similar criticism has also been made of educational psychology. As a consequence there have been developments in the U.S.A., Stoiber and Waas (2002), in Australia, Magecan (2002) and in Britain, Frederickson (2002) to encourage educational psychologists to adopt more structured scientific evaluations of their interventions. As Stoiber and Waas (2002) put it;

*'.. a commitment to promoting effective learning and high achievement makes the goal of identifying what intervention procedures and strategies lead to student success critical, if not the most essential, work of educational psychologists.'* (page 7)

This current research does address some of those concerns and does provide detailed analysis of teachers' current use of verbal feedback and demonstrates how by incorporating positive based strategies into their teaching, the behaviour of their pupils can improve. It therefore meets the criterion of evidence based research in that it has shown not only what does work to improve classroom behaviour, but goes some way in explaining why it might work.

It is clear from the original survey of teachers' current use of verbal feedback that while some teachers are using positive feedback as a part of their strategies to encourage good behaviour and learning, it is not a strategy that has been adopted by all teachers. It is probable that those teachers who do not use this type of positive based approach are exactly those who need to become aware of its potential, as was demonstrated in the training study and to incorporate those strategies into their teaching. Therefore more school-based research is needed aimed at providing teachers in individual schools with a profile of their performance in providing feedback to their pupils. The techniques devised in this study of recording teachers on audiotape could be easily adapted to allow individual teachers to record themselves. This information could then be used as a baseline for improvement. Improvement that could be encouraged through further in-service training or coaching.

More could also be done to examine in greater detail the function of both positive and negative feedback and especially the interaction between has on behaviour. This study found the suggestion of a curvilinear relationship between these two variables in Infant classrooms, but this tended to disappear at Junior and Secondary level. The reasons for this are unclear and would warrant further study.

Furthermore although there is some evidence concerning the extent to which various types of teacher feedback is directed towards different pupils, i.e. pupils earmarked as 'trouble-makers' get more negative feedback, (Russell and Lin, 1977), almost all this work has been carried out in the USA and very little in this country. Similarly very little work has been done on the way teacher verbal feedback is directed towards pupils from different racial background. One exception to this was a recent study by Hathewala-Ward and Swinson (2000). Clearly more work needs to be done in this area, especially in the light of claims from ethnic minority groups that they are over represented in the number of pupils excluded from schools.

Rosenshine (1971) indicates there are a number of studies, largely from investigations in the USA, that have linked teacher feedback to children's' learning and achievement. Although this study focused solely on the relationship between verbal feedback and pupil behaviour, clearly good pupil behaviour should not be an end in itself, but should be part of a larger endeavour to improve all aspects of pupil learning and achievement. More

research needs to be done to examine not only the relationship between behaviour and learning, but also the influence that teacher feedback plays on these key variables.

The methods devised in this study of recording samples of teachers talking in classrooms via simple audio-tape is a technique that can be used to examine this relationship as well as a wide variety of aspects of teaching and learning. This technique has been reported in a number of recent studies i.e. Corrie (1997), in a study of how teachers' knowledge and skills effect their handling of children at story-time and Tunstall and Gipps (1996) study of how teacher feedback in formative assessment can effect pupils' understanding and in a spin-off of this study the audio recordings of teachers' use of questions was examined, Harrop and Swinson (2003). Clearly there are many other aspects of teacher verbal behaviour apart from their use of approval and disapproval or questions that could be examined using this technique.

The main focus of this study, however, remains the relationship between teacher feedback and behaviour. It is a major area of concern for all teachers and therefore should continue to be an area of concern for educational research. The relationship between positive feedback and pupil behaviour has been further enhanced by the findings of this study. There are a number of issues raised in this study that are worthy of further examination,



These are the use of pupils' names in feedback, the use of descriptions, qualitative dimensions of negative feedback including the use of redirection as an alternative to admonishment and the issue of contingency of feedback raised by Brophy in 1981. As in all research, despite the light shed on any area of investigation, many new concerns or interests arise worthy of investigation. Classroom behaviour and raising levels of achievement remain a central concern for all teachers and therefore should be at the forefront of future educational research.

In conclusion the main aims of this study have been achieved.

A detailed study has been made of the verbal feedback used by teachers and the relationship between this feedback and pupil behaviour has been established. The methodology used in this study has been more sophisticated than in almost all previous studies. Pupil behaviour was observed using the Momentary Time Sampling (MTS) method, which is at its most effective when behaviour occurs most of the time. Unlike other studies the observations of both pupil and teacher behaviour were both continuous and simultaneous. Lastly unlike other studies observer agreement was in terms of event agreement. This is the most exacting data on which to calculate observer agreement and by use of Kappa it was possible to demonstrate that the high level of percentage agreement obtained was not due to chance.

The use made of audio tape to record teachers' verbal feedback was far superior to that of most other studies as it allowed a permanent record to be made of transient behaviour. This allowed a much closer and detailed examination to be made of all aspects of teacher feedback to be made and for the accuracy of those observations to be the subject of close examination. In terms of detail this study was not only able to examine those aspects of feedback that had previous been the subject of study, i.e. the direction of feedback in terms of whether it was directed towards work or behaviour or whether it contained a description. It was also able to examine teachers' use of pupils' names in feedback, teachers' use of redirection following negative feedback and the extent to which feedback was directed individually or to groups. These aspects of this study have not been examined in any concerted way in any previous research. It is therefore a legitimate claim that this study provides a much more detailed and accurate account of teacher feedback and its relationship to pupil behaviour than all previous studies including the major British studies of Wheldall and Merrett and their colleagues.

These observations can also be made for the second phase of this study, the evaluation of the training intervention 'Four Essential Steps' and are in contrast most other studies. This is in terms not only the sophistication of the methods used to record both teacher and pupil behaviour but also in terms of the number of pupils observed. A great many behavioural intervention studies use only small numbers of pupils whereas in this study

almost 600 pupils were observed in 19 different classes. This compares favourably with Wheldall, Houghton Merrett and Baddeley's 1989 evaluation of 'Bat sac' which involved 14 teachers and the junior version 'Batpac', Whedall, Merrett and Borg (1985) which was only evaluated in six classes.

The sample of teachers used in this study was therefore larger than in most other studies and of sufficient size to allow some statistically significant effects to be established within each teaching level.

The second important feature of the training study that marks it out as different from previous research is the length of the training that was given to the teachers. Other studies involve at least six hours of teacher training where as the 'Four Essential Steps' was successfully delivered in under three hours.

It is tempting to suggest that one reason for this was that the programme contained all those key elements essential for good conduct in the classroom. It is not however possible to make such a claim as a result of the evidence presented in this study. Moreover within the design of this study it is not possible to disentangle the specific elements of the training package to examine the relationship to specific aspects of the training, teachers' use of those elements and their relationship to pupil behaviour.

It is apparent however that certain elements of the training were not necessarily used a great deal by the teachers during the second set of observations. These included the teachers' use of pupil names which showed only a slight increase and appeared under used at secondary level. There was only a marginal shift towards teachers directing feedback more towards groups as encouraged in the training. The use of redirections following negative feedback did show a large increase in junior classes, but only slight increases in the infant and secondary classes. Teachers' use of descriptions in their feedback did show an increase, especially in negative feedback. However while all these changes were in the direction indicated in the training, the degree of change was often small and in statistical terms was not found to be at a significant level. It is therefore difficult to argue that these changes in the quality of the teachers' use of feedback had a major influence on the changes in pupil behaviour.

This takes us to the ultimate issue in this study, what was it about the changes in teacher feedback that leads to the improvement in pupil behaviour? The firm conclusion must be that it was the changes in feedback that saw a significant reduction in all forms of negative feedback especially that directed to pupils' behaviour and a significant increase in teachers' use of positive feedback especially that directed towards pupil behaviour. In short there appeared to be a fundamental shift in the way that teachers responded to pupils' behaviour after they had been trained. After they were

trained the teachers adopted a positive strategy towards their pupils' behaviour rather than a more negative reactive style they had used in the past. This explanation seems to be not only the most supported by the evidence but also fulfils the criterion of 'Occams Razor' that it is often the simplest explanation to a complex problem that is the right one.

# References

- AXELROD, S. (1977). *Behaviour Modification for the Classroom Teacher*. New York. McGraw-Hill Book Co.
- BARLOW, D & HERSEN, M. (1984) *Single Case Experimental Designs* Oxford: Pergamon Press.
- BEAUMAN, R. & WHELDALL, K. (2000). Teachers' Use of Approval and Disapproval in Classrooms, *Educational Psychology* 20(4). 431-446.
- BECKER, H. (1963). *Outsiders : Studies in the Sociology of Deviance*, New York : Free Press
- BENNETT, S.N., (1978). Recent research on teaching : a dream, a belief and a model, *Educational Psychology*, 48, 127-147.
- BENNETT, S.N., (1976). *Teaching Styles and Pupil Progress*, London: Open Books.
- BIJOU, S.W. (1965) Experimental studies of child behaviour, normal and deviant. In Kasner and Ullman (Eds) *Research in Behaviour Modification*, New York. Holt, Rinehart & Winston.
- BROPHY, J. (1981). Teacher praise : a functional analysis. *Review of Educational Research*, S1 5-32,
- BROWN, D. & Peddler, J. (1979). *Introduction to Psychotherapy*, London : Tavistock Publications.
- CANTER, L. & CANTER, M. (1992). *Assertive Discipline : Positive Behaviour Management for Today's Classrooms*. Santa Monica: Lee Canter Associates.
- CHARLTON, T., LOVEMORE, T., ESSEX, C. & CROWIE, B. (1995). Naturalistic rates of teacher approval and disapproval and on-task behaviour in first and middle school classrooms in St Helena. *Journal of Social Behaviour and Personality*, 10, 817-826.
- CHERRY, E.D. (1953). Some experiments on the recognition of speech with one or two ears. *Journal of the Acoustical Society of America*, 25, 975-9.
- COHEN, J. (1993). *The World Tonight*, BBC Radio 4, 11/6/93.
- COHEN, J. (1960). A co-efficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- COOPER, J.O., HERON, T.L., and HEWARD, W.L. (1987). *Applied Behaviour Analysis*, Columbus OH: Merrill.
- COOPER, P. & UPTON, G. (1990). An ecosystemic approach to emotional and behavioural difficulties in school. *Educational Psychology* 10(4), 301-321.

- CORRIE, L. (1997). *The Interaction between Teachers' Knowledge and Skills when Managing a Troublesome Classroom Behaviour*, Cambridge Journal of Education, 27(1), 93-105.
- DAVIE, R. (1993). 'Assessing and understanding children's behaviour' In *Managing Misbehaviour in Schools*, ed Charton, T. and David, K, Routledge. LONDON.
- DENSCOMBE, M. (1980). *Keeping 'em quiet : the significance of noise for the practical activity of teaching*. In Woods, P., (ed). *Teacher Strategies*, London: Croom Helm.
- DEPARTMENT FOR EDUCATION & SCIENCE, (1989). *Discipline in Schools (The Elton Report)* London: H.M.S.O.
- DINKMEYER, D. & DREIKURS (1963). *Encouraging children to learn : the encouragement process*. Prentice Hall, Englewood Cliffs N.J.
- DWECK, C., DAVIDSON, W., NELSON, S., and ENNA, B. Sex differences in learned helplessness. *Developmental Psychology* 14<sup>th</sup> ed. 268-276.
- FAUPEL, A.W. (1990). A model response to emotional and behavioural development in schools. *Educational Psychology in Practice* 5(4), 172-182
- FITZ-GIBBON, C.T. & CLARK, K.S. (1982). Time variables in classroom research : a study of eight urban secondary school mathematics classes. *British Journal of Educational Psychology*, 52, 301-316.
- FRANKLAND, S., PITCHFORD. Y. & PITCHFORD, M. (1985). The use of video recording to provide repeated monitoring of the successful use of roles, praise and ignoring. *Behavioural Approaches with Children*, 9. 67-68.
- FREDERICKSON, N., (2002). Evidence-based practice and educational psychology. *Educational and Child Psychology* 19 (3) 96-111.
- FRY, P.S., (1983). Process measures of problem and non-problem children's classroom behaviour : the influence of teacher behaviour variables. *British Journal of Educational Psychology*, 53, 79-88.
- GALTON, M., SIMON, B. & CROLL, P. (1980). *Inside the Primary Classroom*. London, Routledge & Keegan Paul.
- GALVIN, P., MERCER, S. & COSTA, P. (1990). *Building a Better Behaved School*, Longman York.
- GARRITY, K., and DEGELMAN, D., (1990). Effect of server introduction on restaurant tipping. *Journal of Applied Social Psychology* 20, 2. 168-172.
- GILCHRIST, E.P. (1916). The extent to which praise and reproof affect a pupil's work. *School Society*, 4, 872-874.
- GILHAM, W.E.C. (1978) (ed), *Reconstructing Educational Psychology*. London: Croom Helm.
- GILHAM, W.E.C. (1981) *Problem Behaviour in Secondary Schools*. London: Croom Helm.

- GLASSER, W. (1992) *The quality school: Managing students without coercion*. 2<sup>nd</sup> edition Harper Perennial, New York
- GRAY, J. & SIME, J. (1988). Findings from National Survey of Teachers in England and Wales in "Elton Report" *Discipline in School*. DES. (1989)
- HANKO, G. (1993). The right to teach – but what are Lee Canter's children learning? *British Journal of Special Education* 20(2) 71-85.
- HARGREAVES, D.H., HESTER, S.K. AND MELLOR, F.J. (1975) *Deviance in Classrooms*. London : Routledge.
- HARRIS, A., and KAPHE, R., C1978. Problems of quality control in the development and use of behavioural change techniques in public school settings. *Education and treatment of children* 1 p43-51.
- HARROP, L.A. (1974). A behavioural workshop for the management of classroom behaviour. *British Journal of In-Service Education*, Vol. 1, No.1.
- HARROP, L.A., (1974). A Behavioural Workshop for the Management of Classroom Problems *British Journal of In-Service Education*, 1 (1) 47-50.
- HARROP, L.A., (1978) Another Gain for the Modifiers. *Special Education Forward Trends* 5 (1). 15-17
- HARROP, L.A., (1980). Behaviour Modification in schools: A time for caution. *Bulletin of the British Psychological Society* 33, 158-160.
- HARROP, A., (1983). Behaviour Modification in the Classroom. London: Hodder & Stoughton.
- HARROP, A., DANIELS, M. AND FOULKES, C. (1990). The use of momentary time sampling and partial interval recording in behavioural research. *Behavioural Psychotherapy*, 18, 121-127.
- HARROP, A. & SWINSON, J. (2000) Natural rates of approval and disapproval in British infant, junior and secondary classrooms *British Journal of Educational Psychology* 70 473-483.
- HARROP, A. & SWINSON, J. (2003) Teachers' Questions in the Infant, Junior and Secondary School. *Educational Studies* 29 (1) 49-57
- HATHAWALA-WARD, H. & SWINSON, J. (1991). Teachers' verbal responses in a multi-racial primary school. *Educational & Child Psychology* 16(3), 37-43.
- HELLER, M. & WHITE, M. (1975). Rates of teacher approval and disapproval to higher and lower ability classes. *Journal of Educational Psychology*, 67 796-800.
- HENRY, S. (ed) (1989). *Degrees of Deviance : Student Accounts of their deviant behaviour*. Aldershot : Aveburg Gower.
- HOUGHTON, S., WHELDALL, K., JUKES, R. & SHARPE, A. (1990). The effects of limited private reprimands and increased private praise on



- classroom behaviour in four British secondary school classes. *British Journal of Educational Psychology*, 60, 255-26.
- JOLLY, M. & McNAMARA, E., (1992). *Pupil Behaviour Schedule Towards Better Behaviour*. Ainsdale.
- KENT, R.N., KANOWITZ, J., O'LEARY, K.D. & CHEIKEN, M. (1977). Observer reliability as a function of circumstances of assessment. *Journal of Applied Behaviour Analysis*, 10, 317-324.
- KOUNIN, J.S., (1970). *Discipline and Group Management in Classrooms*. New York. Rinehart & Winston Inc.
- KOUNIN, J.S., GUMP, P.V., and RYAN, J.J., (1961). Explorations in Classroom Management. *Journal of Teacher Education* 12. 235-247.
- KOUNIN, J. AND GUMP, P. (1958). The ripple effect in discipline. *Elementary School Journal* 59. 158-62.
- KUPLAN, J.S. & CARTER, J. (1995). *Beyond behaviour modification : a cognitive behavioural approach to behaviour management in the school*. Pro-Ed Austin, Texas, USA.
- KYRIACOU, C. (1986). *Effective Teaching in Schools*. Oxford Basil Blackwell.
- LEPPER, M.R., and GREENE, D. (1978). *The Hidden Costs of Reward*. Morriston New Jersey, Lawrence Earlbaum.
- LEPPER, M.R., and GREEN, D., and NESBITT, R.E., (1973). Understanding Children's intrinsic interest with extrinsic reward. *Journal of Personality and Social Psychology* 28, 129-137.
- LEWIN, K. (1935). *Dynamic Theory of Personality*. Selected Papers. New York. McGraw-Hill.
- McALLISTER, L.W., STACHOWIAK, J.G., BEAR, D.M. & CONDERMAN, L. (1969). The application of operant conditioning techniques in a secondary classroom. *Journal of Applied Behaviour Analysis*, 2, 277-285.
- MCCORMICK, S.L. (1985). Students' off-task behaviour and Assertive Discipline. *Dissertation Abstracts International*, 46, 1880A.
- McCOLL, L. & FARRELL, P. (1990). Method used by educational psychologists to assess children with emotional and behavioural difficulties. *Educational Psychology in Practice*, 9(3), 164-169.
- McNAMARA, E., EVANS, M. AND HILL, W. (1986). The reduction of disruptive behaviour in two secondary school classes. *British Journal of Educational Psychology*, 56, 209-215.
- McNAMARA, E. & HEARD, A. (1976). Self control through self recording. *Special Education: Forward Trends* 3, 157-168.
- MADSEN, C.H., BECKER, W.C. & Thomas, D.R. (1968). Rules, praise and ignoring elements of elementary classroom control. *Journal of Applied Behaviour Analysis* 1,(2), 139-50.

- MAGEEAN, B., (2002). The evidence of psychology in action. *Educational and Child Psychology* 19 (3), 22-31.
- MAKINS, V. (1991). Five steps to peace in the classroom. *Times Educational Supplement*, 1/11/91.
- MANDLEBAUM, L.H., RUSSELL, S.C., KROUSE, J. & GONTER, M. (1983). Assertive Discipline : an effective classwide management program. *Behaviour Disorders*, 8, 258-264.
- MARZILLER, J. (2004). The myth of evidence-based psychotherapy. *The Psychologist* 17 7 392-395.
- MAYER, G.M. (1995). Preventing anti-social behaviour in the schools. *Journal of Applied Behaviour Analysis*, 28, 467-478.
- MAYER, G.R. & BUTTERWORTH, T. (1979). A preventative approach to school violence and vandalism : An experimental study. *Personal and Guidance Journal*, 57, 436-441.
- MAYER, G.R., BUTTERWORTH, T. , NAHPAKTITIS, M. & SULZER-AZAROFF, B. (1983). Preventing school vandalism and improving discipline : A three-year study. *Journal of Applied Behavioural Analysis*, 16, 355-369.
- MERRETT, F. & BLUNDELL, D. (1982). Self-recording as a means of improving classroom behaviour in secondary school. *Educational Psychology* 2, 145-157.
- MERRETT, F., JACKSON, P. & FITZPATRICK, A. (1991). The effect of changes in teacher response ratios on pupils' behaviour. *Positive Teaching*, 2, (2), 79-91.
- MERRETT, F. & WHEDALL, K. (1986). Observing pupil and teachers in classrooms (OPTIC) : A behavioural observation schedule for use in schools. *Educational Psychology*, 6, 57-70.
- MERRETT, F. & WHEDALL, K. (1987). Natural rates of teacher approval and disapproval in British primary and middle school classrooms. *British Journal of Educational Psychology*, 57, 95-103.
- MILLER, A. (2003) Teachers, Parents and Classroom Behaviour. A Psychosocial Approach. Maidenhead: Open University Press
- MYER, G.R. & BUTTERWORTH, T. (1979). A preventative approach to school violence and vandalism : An experimental study. *Personnel and Guidance Journal*, 57, 436-441.
- MYER, W., and LINDSTROM, D., (1969). The distribution of teacher approval and disapproval of Head Start children. (Find Report, Contact No. OEO-4120): *United States Office of Economic Opportunity*.
- NAHPAKTITIS, M., MAYER, G.R. & BUTTERWORTH, T. (1985). Natural rates of teacher approval and disapproval and their relation to student

- behaviour in intermediate school classrooms. *Journal of Educational Psychology*, 77, 363-367.
- NAU, P.A., VAN HOTEN, R. & O'NEIL, A. (1981). The effects of feedback and a principal – mediated time-out procedure on the disruptive behaviour of junior high school students. *Education and Treatment of Children* 4(2), 101-113.
- NICHOLS, D. & HOUGHTON, S. (1995). The effect of Canter's Assertive Discipline Programme on teacher and student behaviour. *British Journal of Educational Psychology*, 65, 197-210.
- O'DONOHUE, W. & KRASNER, L. (1995). *Theories of Behaviour Therapy*, American Psychological Association, Washington, DC.
- O'LEARY, K.D. & O'LEARY, S.G. (1972). *Classroom Management the Successful Use of Behaviour Modification*. Oxford: Pergamon Press.
- PATERSON, G.R. & REID, J.B. (1971). Reciprocity and coercion : two facets of social systems. In Neuringer, C. & Michael, J. (Eds) *Behaviour Modification in Clinical Psychology – New York*. Apple-Century-Crofts.
- PHILLIPS, D., DAVIE, R. & CULLELY, E. (1985). Pathway to institutional developments in secondary schools in Reynolds D (ed) *Studying School Effectiveness*, London : Fulmer Press.
- RAYMOND, J. (1987). An educational psychologist's interaction with a class of disruptive pupils. *Educational Psychology in Practice*, 3,(2), 16-22.
- REES, C., FARRELL, P. & REES, P. (2003). Coping with complexity : how do Educational Psychologists assess students with emotional and behavioural difficulties. *Educational Psychology in Practice*, 19,1, 35-64.
- REYNOLDS, D. (1992). School effectiveness and school improvement : an updated review of British literature, in D. Reynolds & P Cattance (eds) *School Effectiveness : Research, Policy and Practice* London : Cassell.
- RHODES, J. (1993). The use of solution-focus brief therapy in school. *Educational Psychology in Practice* 9(1), 27-34.
- RODGERS, B. (1998). *You know the fair rule*. Melbourne: ACER.
- RODGERS, T.A., and IWATA,, B.A., (1991). An analysis of error-correction procedures during discrimination training. *Journal of Applied Behaviour Analysis* 24, 775-782
- ROMANCZYK, R.G., KENT, R.N., DIAMENT, C., and O'LEARY, K.D., (1973). Measuring the reliability of observational data: a reactive process. *Journal of Applied Behaviour Analysis*, 6. 175-185.
- ROSENSHINE, B. (1971). *Teaching Behaviours and Student Achievement*. N.F.E.R., Slough.
- RUSSELL, A. & LIN, L.G. (1977). Teacher attention and classroom behaviour. *The Exceptional Child*, 24, 148-155.

- RUTTER, M., MAUGHAN, B., MORTIMORE, P. & OUSTON, J. (1979). *Fifteen Thousand Hours : Secondary Schools and Their Effects on Children*. London. Open Books.
- SCHWIESO, J. & HASTINGS, N. (1987). Teachers use of approval in N. Hastings & J. Schwieso (Eds) *New Directions in Educational Psychology, Vol. 2, behaviour and motivation in the classroom*, 115-136. London, Falmer.
- SCOTT, L., McNAMARA, E. AND McPHERSON, E. (1986). The use of behaviour modification in a secondary school : A further development. *Educational and Child Psychology*, 3, 4-20.
- SHERMAN, T.M. & CORMIER, W.H. (1974). An investigation of the influence of student behaviour on teacher behaviour. *Journal of Applied Behaviour Analysis*, 7, 11-21.
- SKINNER, B.F., (1938). The behaviour of organisms. *New York, Appleton-Century-Crofts*.
- SKINNER, B.F., (1953). Science and Human Behaviour. *New York, Macmillan*
- SKINNER, B.F., (1968) The technology of Teaching. *New York: Appleton Century Crofts*.
- SIDMAN, M. (1960). *Tactics of Scientific Research – Evaluating Experimental Data in Psychology*. New York. Basic Books.
- SOMMER, R. & SOMMER, B. (2002). *A practical guide to Behavioural Research 5<sup>th</sup> edition*. O.U.P. Oxford.
- STOIBER, K.C., and WAAS, G.A., (2002). A contextual and methodological perspective on the evidence-based intervention movement with school psychology in the United States. *Educational and Child Psychology* 19 (3). 7-21.
- STRAIN, P.S., LAMBERT, D.L., KERR, M.M., STAGG, V. & LENKER, D.A. (1983). Naturalistic assessment of children's compliance to teachers' requests and consequences for compliance. *Journal of Applied Behaviour Analysis* 16, 243-249.
- SQUIRES, G. (1996). *The long term effects of Assertive Discipline*. Unpublished M.Ed. thesis University of Manchester.
- SUTHERLAND, S. (1992). *Irrationality the Enemy Within*. Harmsworth: Penguin.
- SWINSON, J. (1990). Improving behaviour : A whole-class approach using pupil perceptions and social skills training. *Educational Psychology in Practice*, 6(2), 82-89.
- SWINSON, J. & CORDING, M. (2002). Assertive discipline in a school for pupils with emotional and behavioural difficulties. *British Journal of Special Education*, 29(3), 72-75.

- SWINSON, J & HARROP, A (2002) The Differential Effects of Teacher Approval and Disapproval in Junior and Infant Classrooms. *Educational Psychology in Practice* 17 (2) 157-167
- SWINSON, J. & MELLING, R. (1995). Assertive Discipline – four wheels on this wagon – a reply to Robinson and Maines. *Educational Psychology in Practice*, 11(3) 1-8.
- SWINSON, J., WOOF, C & MELLING, R. (2003) Including Emotional and Behaviour Difficulties Pupils in Mainstream Comprehensive. *Educational Psychology in Practice* 19 (1) 65-75
- THARP, R.G. & WETZEL, R.J. (1969). *Behaviour modification in the natural environment*. New York. Academic Press.
- THOMAS, J.D., PRESLAND, I.E., GRANT, M.D. & GLYNN, T. (1978). National rates of teacher approval and disapproval in grade 7 classrooms. *Journal of Applied Behaviour Analysis*, 11(1) 91-94.
- THORNDIKE, E.L. (1898). *Animal Intelligence*. Psychol. Rev. Monogr., Supplement No. 2.
- TOPPING, K. (1980). *Educational Systems for Disruptive Adolescents*. London: Croom Helm.
- TORGERSON, D. & TORGERSON, J. Randomised Control Trials in Educational Research. *British Journal of Educational Studies* 49(3) 13-25.
- TUNSTALL, P. & GIBBS, C. (1996). How does your teacher help you to make your work better? Children's understanding of formative assessment. *The Curriculum Journal*, 7, (2), 185-203.
- VISSER, J. (1983). The humanistic approach in Upton, G. & Gobell, A. (eds) *Behaviour Problems in a Comprehensive School*, Cardiff Faculty of Education, University College.
- WARD, J. (1976). Behaviour modification in education : an overview and a model for programme implementation. *Bulletin of the British Psychological Society*, 29, 257-268.
- WARD, L. (1983). An evaluation of Assertive Discipline as a means of reducing classroom disruptions. *Dissertation Abstracts* 44(2141A) *Doctoral Dissertations*. Texas Technological University.
- WARD, L. (1984). The effectiveness of Assertive Discipline as a means to reduce classroom disruptions. *Dissertation Abstracts International*, 44, 2323A.
- WATSON, J.B. (1913). Psychology as the Behaviourist Views It. *Psychological Rev.*, 20, 158-177.
- WHELDALL, K. & AUSTIN, R. (1980). Successful behaviour modification in secondary school – a reply to McNamara & Harrop. *British Psychology*

*Society Division of Educational & Child Psychology Occasional Papers, 4(3), 3-9.*

WHELDALL, K. & BEAMAN, R. (1994). An evaluation of the WINS (Working Ideas for Need Satisfaction), training package, *Collected Original Resources in Education 18(1) fich4E01.*

WHELDALL, K., HOUGHTON, S. & MERRETT, F. (1989). Natural rates of teacher approval and disapproval in British secondary school classrooms. *British Journal of Educational Psychology, 59, 38-48.*

WHELDALL, F., HOUGHTON, S., MERRETT, F. & BADDELEY, A. (1989). The Behavioural Approach to Teaching Secondary Aged Children (BATSAC). Two behavioural evaluations of a training package for secondary school teachers in classroom behavioural management. *Educational Psychology, 9(3), 185-196.*

WHELDALL, K. & MERRETT, F. (1986). Reducing troublesome classroom behaviour in the secondary school. *Maladjusted and Therapeutic Education, 3(2), 37-46.*

WHELDALL, K. & MERRETT, F. (1987). *What is the behavioural approach to teaching?* In Hartings, N & Schwiesco, J. (Eds) *New Directions in Educational Psychology II : Behaviour and Motivation in the classroom.* London: Falmer.

WHELDALL, K. & MERRETT, F. (1988). Packages for Training Teachers in Behaviour Management. BATPACK., BATSAC and the Positive Teaching Packages. *Support for Learning 3, 86-92.*

WHELDALL, K., MERRETT, F. & BORG, M. (1985). The behavioural approach to teaching package (BATPACK) and experimental evaluation. *British Journal of Educational Psychology, 55, 65-75.*

WILSON, C.W. & HOPKINS, B.L. (1973). The effects of contingent music on the intensity of noise in junior high home economic classes. *Journal of Applied Behaviour Analysis, 6, 269-275.*

WINTER, S. (1990). Teacher approval and disapproval in Hong Kong secondary school classrooms. *British Journal of Educational Psychology, 60, 88-92.*

WHITE, M.A. (1975). Natural rates of teacher approval and disapproval in the classroom. *Journal of Applied Behaviour Analysis, 3, 367-372.*

WOLF, M.M., GILES, D.K. & HALL, V.R. (1968). Experiments with token reinforcement in a remedial classroom. *Behaviour Research and Therapy 6, p51-64.*

WOODS, S., HODGES, C. & ALJUNIED, M. (1996). The effectiveness of Assertive Discipline training, look before you leap of this wagon. *Educational Psychology in Practice, 12(3), 175-181.*

WOODS, P. (1979). *The Divided School*. London: Routledge and Keagan Paul.

WYATT, W.J. AND HAWKINS, R.P. (1987). Rates of teachers' verbal approval and disapproval. *Behaviour Modification*, 11(1), 27-51.

## Appendix 4

### GUIDELINES FOR RECORDING TEACHER VERBAL FEEDBACK

#### Introduction

The Teacher Verbal Feedback Schedule is designed to record the verbal responses of teachers in classrooms.

Verbal feedback is recorded on the Teacher Verbal Feedback schedule if it is considered to be of either a Positive or Negative nature. It is further classified as being aimed at either Task or Behaviour and, in addition, whether the feedback is directed towards an Individual or a Group is recorded.

The following procedure is followed for each instance of teacher verbal feedback that is considered to contain a positive or a negative element. Definitions, examples and clarification follow the procedure.

- i) It is useful to use a cassette recorder which has a 'counter'. This should be reset to 0 to correspond with the beginning of the tape. The counter number should then be recorded in the first column, to correspond with the start of the verbal feedback. (This is useful for the subsequent identification of specific instances of feedback.)
- ii) The nature of the feedback (i.e. positive or negative) is decided and this is indicated on the sheet by placing the following information (iii - vi) under the appropriate heading (i.e. Positive or Negative).
- iii) It should then be decided whether the verbal feedback is aimed at the work that is being done (i.e. Task) or at Behaviour. This is noted via the use of a T (Task) or a B (Behaviour) in the column marked Task/Behaviour.
- iv) A tick  $\checkmark$  should then be placed in the column headed Ind (individual) or in the column headed Gp (group) to identify whether the feedback was directed at an individual child or at a group of children. When it is unclear whether the feedback is aimed at an individual or a Group the observer should assume that the feedback is aimed at an individual.
- v) If the verbal feedback contains a description (see below for guidance) then a tick  $\checkmark$  should be placed in the column headed Des.
- vi) The same procedure is followed for both positive and negative feedback. However, negative feedback includes an extra dimension, that of a redirection. If a redirection occurs following the negative feedback (see below for guidance) then a tick  $\checkmark$  is placed in the column headed Redir.
- vii) Finally, it is useful to record the key words of the feedback in the column headed Notes. This allows for easy identification of each particular instance of feedback.



The following are examples of the type of verbal feedback that would be recorded. The classifications follow in bold type.

'Well done this table' **Positive, Group (could be Task or Behaviour)**

'Good boy David' **Positive, Individual (could be Task or Behaviour)**

'No, don't do that Kevin' **Negative, Individual (could be Task or Behaviour)**

'Shut up the back row' **Negative, Group, Behaviour**

### **Positive Feedback**

For the purposes of this investigation, Positive Feedback falls into one of two broad categories. It can be defined as verbal feedback which praises or reinforces pupil behaviour and verbal feedback that is directed at a task related activity. Examples of the latter include the acknowledgement of, or praise for, a correct answer (this can include repetition of a correct answer by the teacher) and praise for good work.

### **Negative Feedback**

Negative Feedback also falls into two categories. It can be defined as verbal feedback that is aimed at reducing or eliminating inappropriate classroom behaviour and verbal feedback that eliminates error or castigates poor work.

### **Task/ Behaviour**

There is a distinction made between verbal feedback directed at task related activities and verbal feedback which is directed to behaviour.

### **Individual (Ind.)**

Verbal feedback that is directed at an individual child (often indicated by the use of the child's name) falls into this category.

### **Group (Gp.)**

Verbal feedback that is directed at more than one child falls into this category. If there is any uncertainty then it should be assumed that the teacher is addressing an individual (see above).

### **Description**

Both positive and negative verbal feedback may also include a description. A description occurs if the exact reason for the positive or negative comment is brought to the attention of the child. e.g.

'Well done Kevin that's neat handwriting' **Positive, Individual, Task with Description**

'No table five you are making too much noise' **Negative, Group, Behaviour with Description**

When recording a description, as with any aspect of the analysis, it is important that the observer does NOT assume the presence of any non-verbal behaviour (e.g. hand

gestures). Therefore, if a teacher says 'That's beautiful' then no description is logged (even though he/she may have been pointing to a particular piece of work).

It should also be noted that the repetition of a child's correct answer to a question should be logged as a description. e.g.

Teacher: 'What is this called?'

Child: 'A caterpillar'

Teacher: 'A caterpillar'

This includes a description because, not only is the child receiving an acknowledgement that they have answered correctly, but they also know exactly what it is that is correct - as do the rest of the class (where appropriate).

A further important point to note is that description can precede the positive/negative comment. e.g.

'Try and keep within the edges. Look at Kieran's. That's a good one isn't it'

This also illustrates the complexity of defining a description. Although the statement is initially directed at another child ('Try and keep within the edges') she uses Kieran's work as an example of excellence, where Kieran has kept within the lines. Therefore, Kieran receives positive feedback with a description, almost by proxy!

### **Redirection**

Negative feedback may also include a redirection. A redirection occurs when a child receives an instruction in the same section as the reprimand. e.g.

'Don't do that Kevin - I want you to work in silence' **Negative, Behaviour, Individual with Redirection**

### **Examples of Positive Feedback**

Common examples: 'Excellent', 'Good girl', 'Yes', 'Well done', etc.

Other more subtle examples:

'That's the word' (when responding to a child's correct response) **Positive, Task, Individual**

Teacher: 'What's the title?'

Child: 'The Dead of Night'

Teacher: 'The Dead of Night'

**Positive, Task, Individual with Description**

'Who did all this? Was it Lee and Holly and Clare? Right I'll come and get you a sticker.' **Positive, Task, Group**

'That's really good to keep your teeth healthy' **Positive, Behaviour, Group with Description**

'I owe you a sticker - I'll get yours now' **Positive, Task, Individual**

'Thank you' following a *Direction* is **Positive Feedback**

'It must be Bimbo'(when responding to a child's correct response) **Positive, Individual with Description**

#### **Examples of Negative Feedback**

Common examples: 'Stop that', 'Be quiet', 'No Kevin', etc.

Other more subtle examples:

'Shh' **Negative, Behaviour usually Group and Descriptive**

If there is a 1 second gap between statements then it counts as two.

i.e. 'Shh...' 1 sec '...shshsh' is two examples.

Use tape counter as a guide.

'Paul Johnson don't mess around' **Negative, Behaviour, Individual**

'Andrew Hall I wont tell you again' **Negative, Behaviour, Individual**

'Where's the worksheet?' **Negative, Behaviour** 'It should be in your hand'  
**Redirection**

'Now is not the time to be tidying desks' **Negative, Behaviour** 'Now is the time to be planning your story' **Redirection**

The naming of a child in the middle of a sentence:

'He is dripping wet...Victoria...dripping wet' **Negative, Behaviour, Individual**

'Victoria are you listening?' **Negative, Behaviour, Individual**

#### **Directions**

The following are *directions* and would not normally be recorded providing that they are said in a 'normal' tone of voice. However, if these or instructions like them are 'shouted' in order to reduce behaviour then they must be interpreted as negative feedback.

'Paul Johnson sit down' *Direction*

'Now I want quiet and listen to me' *Direction*

'Don't put your hand up' *Direction*

'Ben be quiet and listen for a minute' *Direction*

'Lee come and sit down' *Direction*

'Thank you Victoria you can leave that and come and sit over here' *Direction*

#### **Some Clarification:**

'What have I just said?'

(this is not negative feedback)

Teacher Verbal Feedback

Observation No. B.S. 1

Time 70 min

Recorder JS

Tape No.	Positive				Negative					Notes
	Task/ Behaviour	Ind.	Grp.	Des	Task/ Behaviour	Ind.	Grp.	Des.	Redir	
14					B	✓		✓	✓	Julie
21					B	✓		✓		Ben
24	B	✓		✓	<del>B</del>	<del>✓</del>			<del>✓</del>	" Thank
41					B	✓		✓		Ben not
45					B		(J+S)	✓		[sh as descrip]
<del>47</del>					<del>B</del>		<del>✓</del>	<del>✓</del>		<del>sh as</del>
* 58	B	✓								- Good Tidy in
65	T	✓		✓						- Yonic in sensible
86	T	✓		✓						Shirley (see table)
91	T	✓	(✓)							
93	T	✓								
99	T	✓								well do good gi
100	T	✓								well d
102	T		✓							nice
106	T	✓								Lee's
107	T	✓								good
110	T	✓								good ✓
133	T	✓		(✓) Blue						well d
134	T	✓		✓ "						Alan
178	T	✓		✓						Good j.
218	B	✓		✓						Really sticks
219	T	✓		✓						
128	T	✓		✓						167
129	T	✓		✓						Yellow
132	T	✓		✓						170



**MANAGING  
BEHAVIOURAL  
INCLUSION**

**4**

**ESSENTIAL  
STEPS**

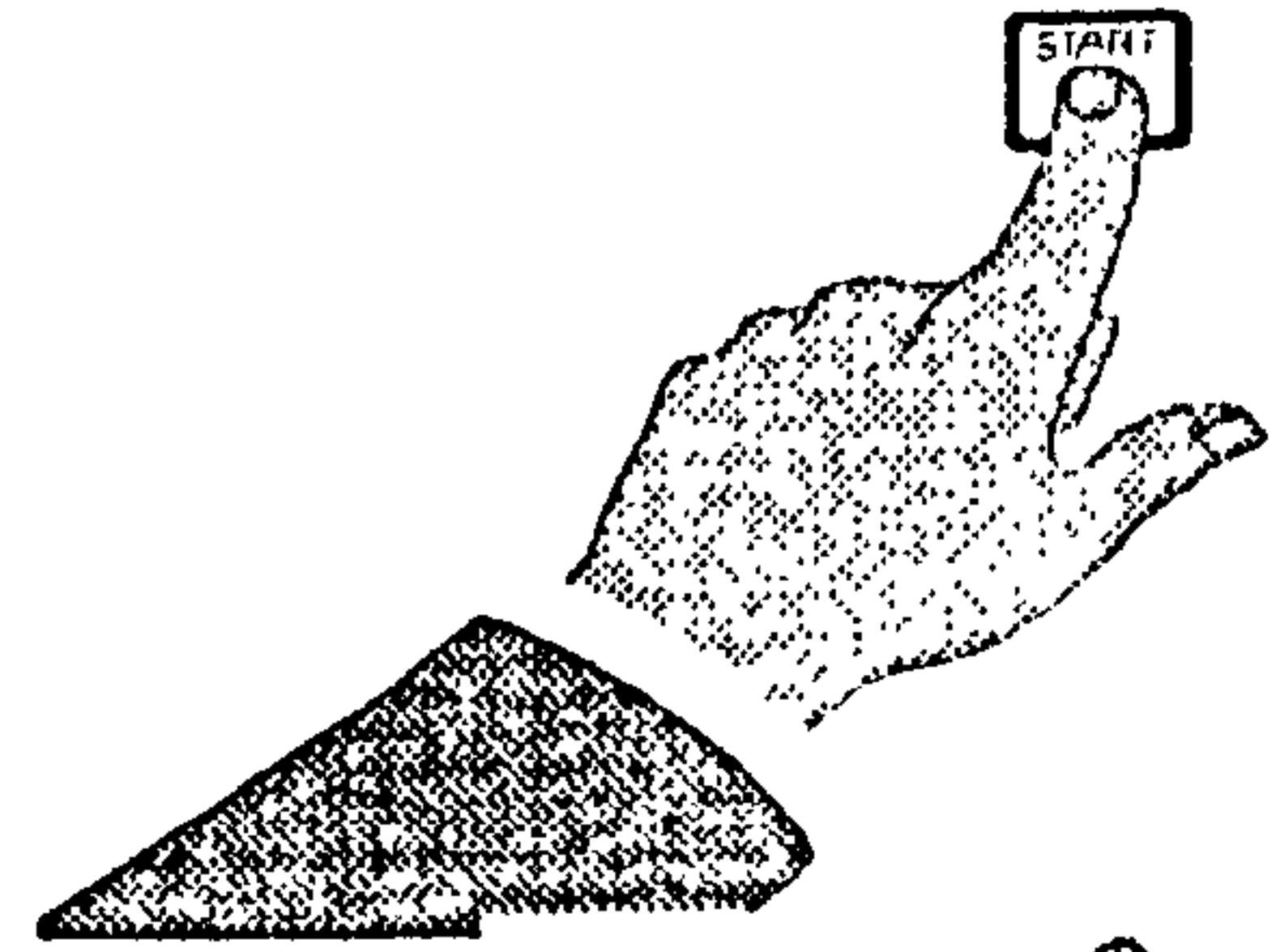
1

**Always make your  
requirements  
absolutely clear.**

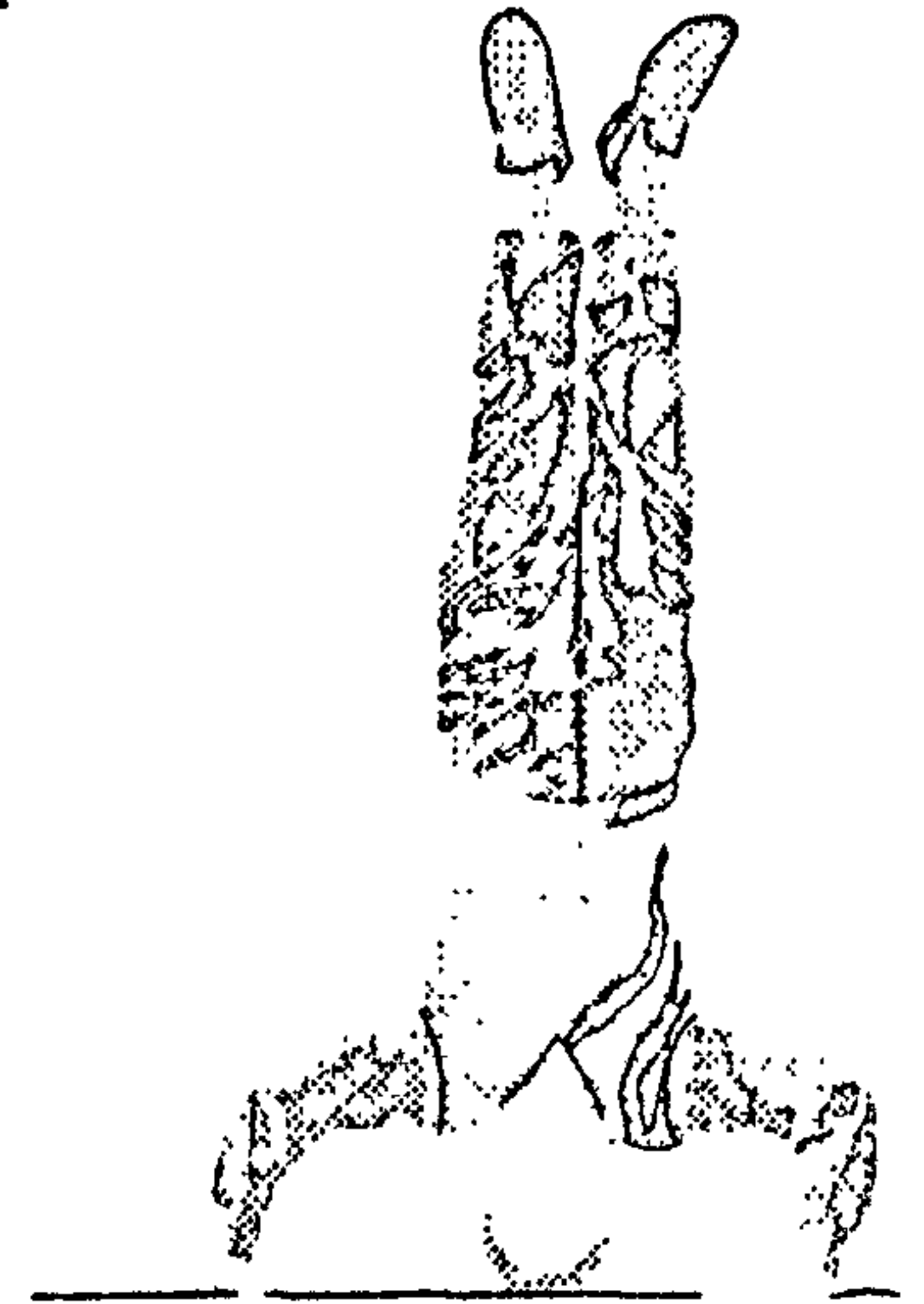


# Guidelines for teaching your requirements.

**Keep the requirements  
simple-Limit the number.**



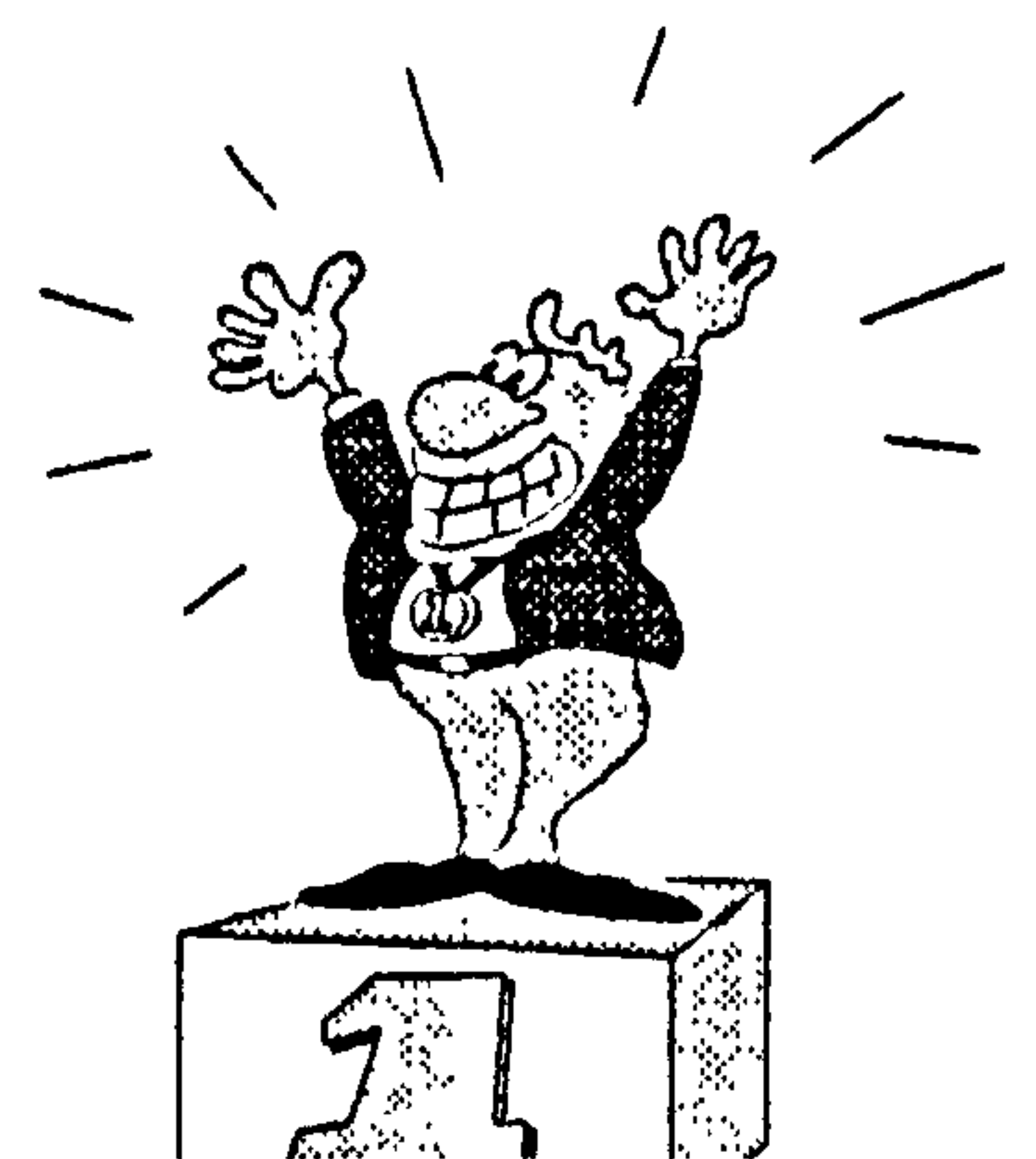
**Requirements  
must be observable.**



**Requirements must relate to how  
the pupil is to participate in the  
activity.**



**Requirements must relate to how  
the pupils behave in order to be  
successful.**





# The M.I.N.C.

**M**(aterials students) need

**I**(n seat or out of seat)

**N**(oise level) expected

**C**(ommunicate) with teacher

# Teach your requirements for each class situation.

**State your requirements.**



**Question students for understanding.**



**Role play with students**

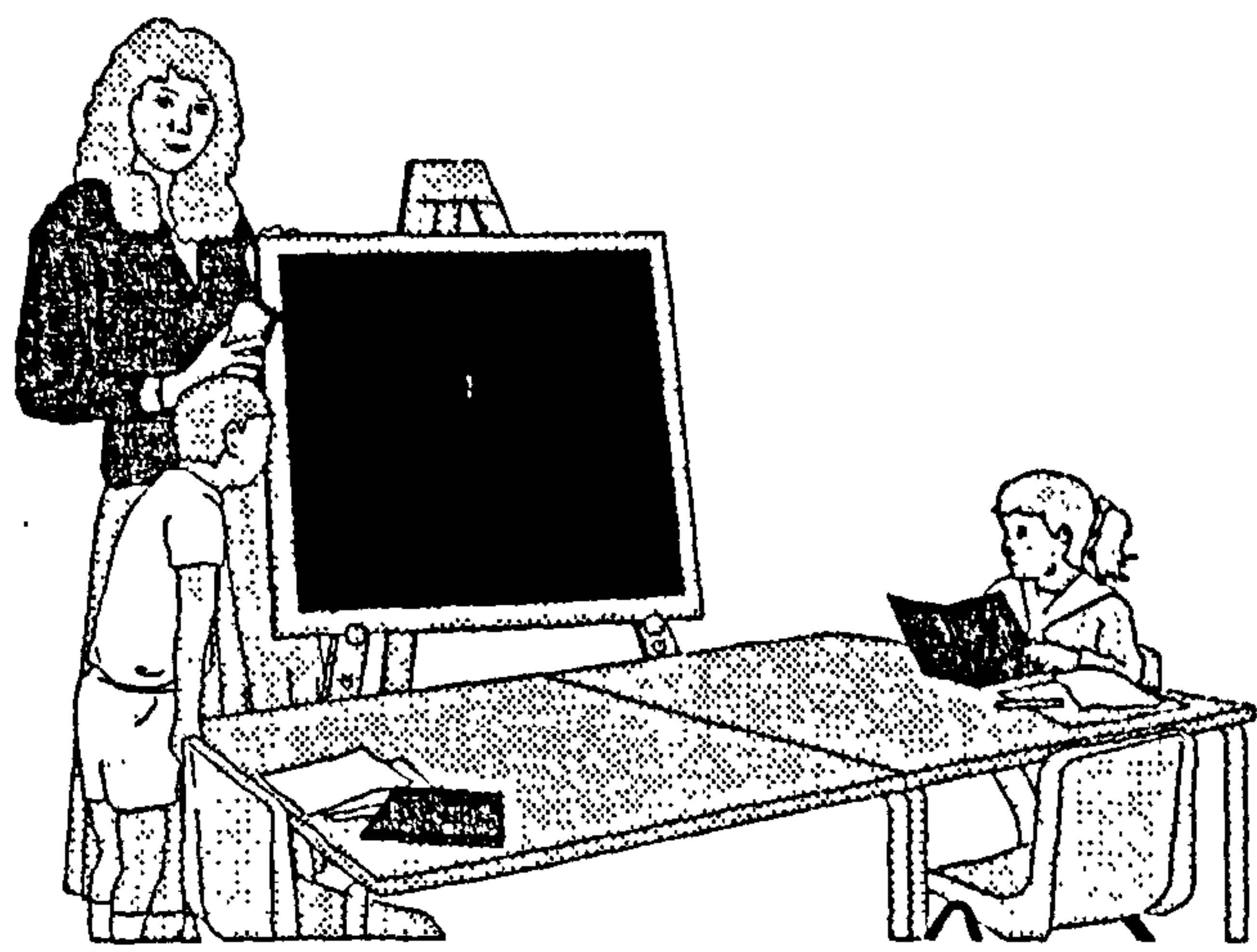


**Repeat your requirements as required.**

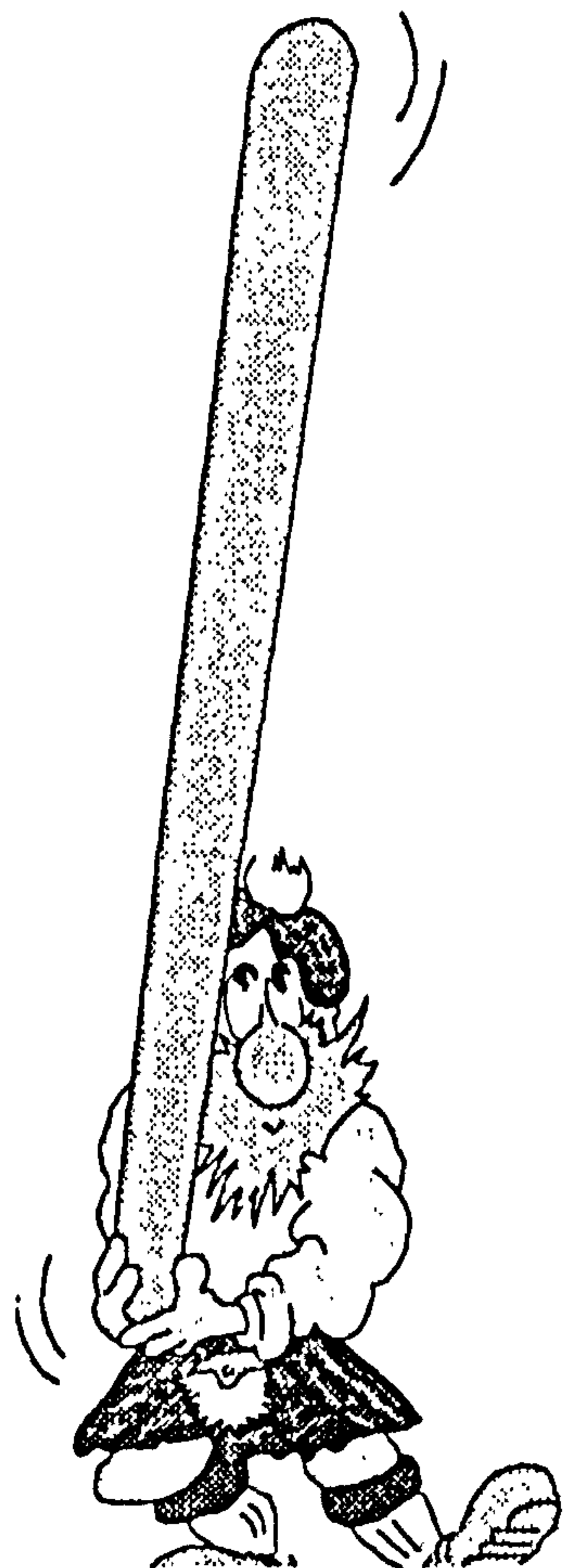


2

**Remember to look  
for the behaviour  
you want**



**rather than the  
behaviour you  
don't want.**

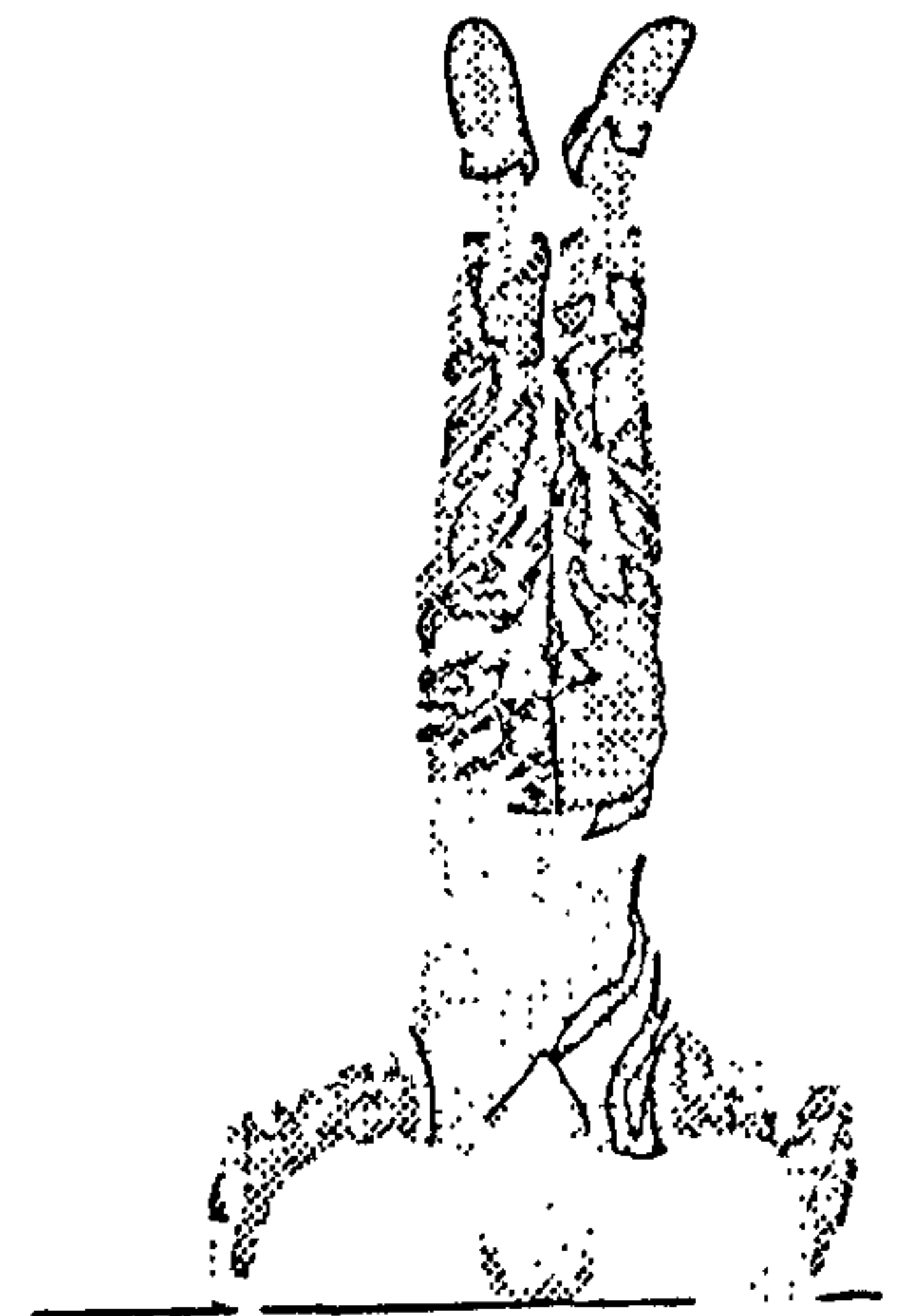


# Using feedback for appropriate behaviour to get students on task.

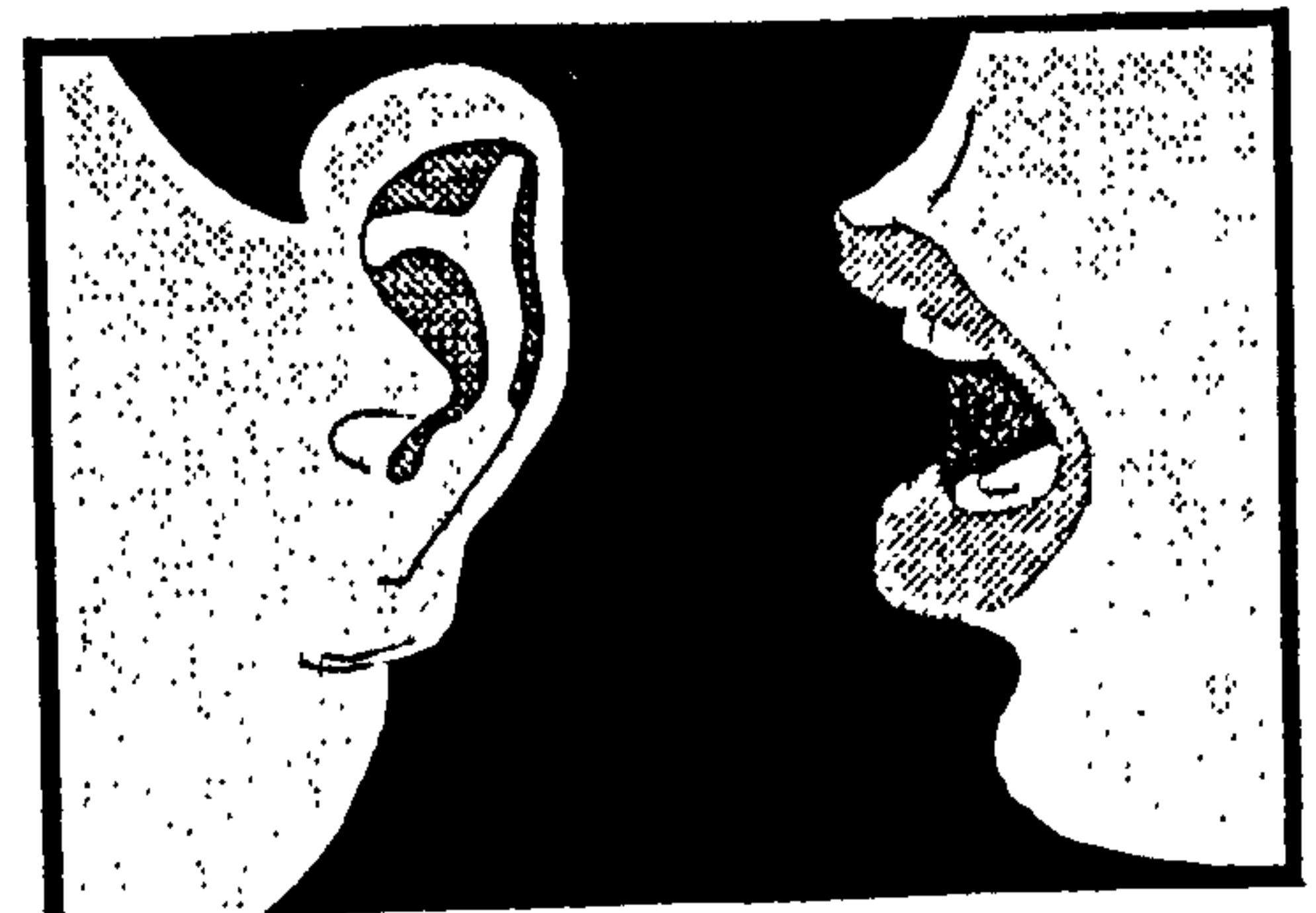
**Give requirements.**



**Look for students following  
requirements.**

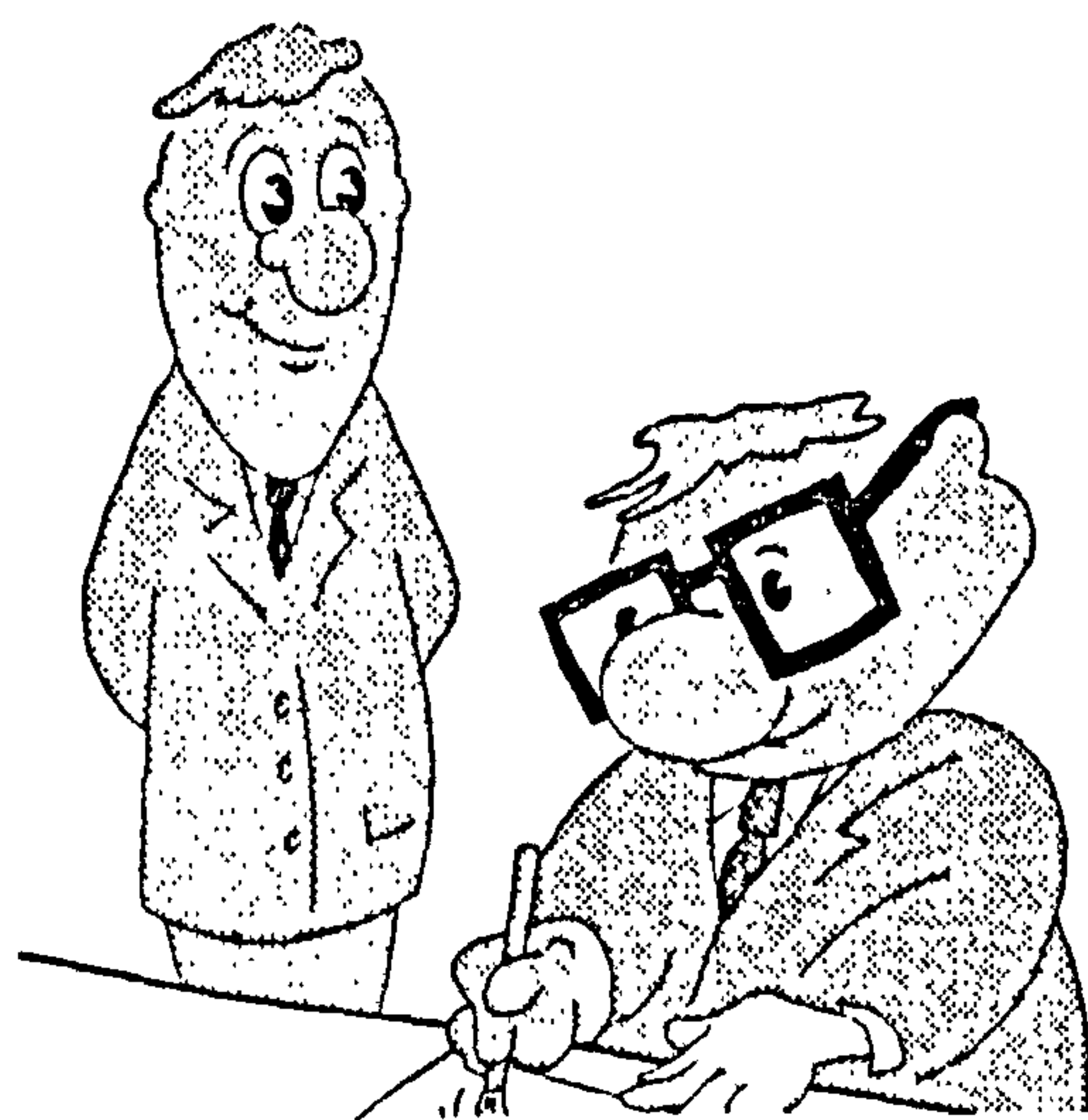


**Say name, repeat requirements  
and use an approving comment.**



# 3

**Frequently  
acknowledge  
students when they  
are doing what is  
required. Consider  
using “whole class  
rewards”.**

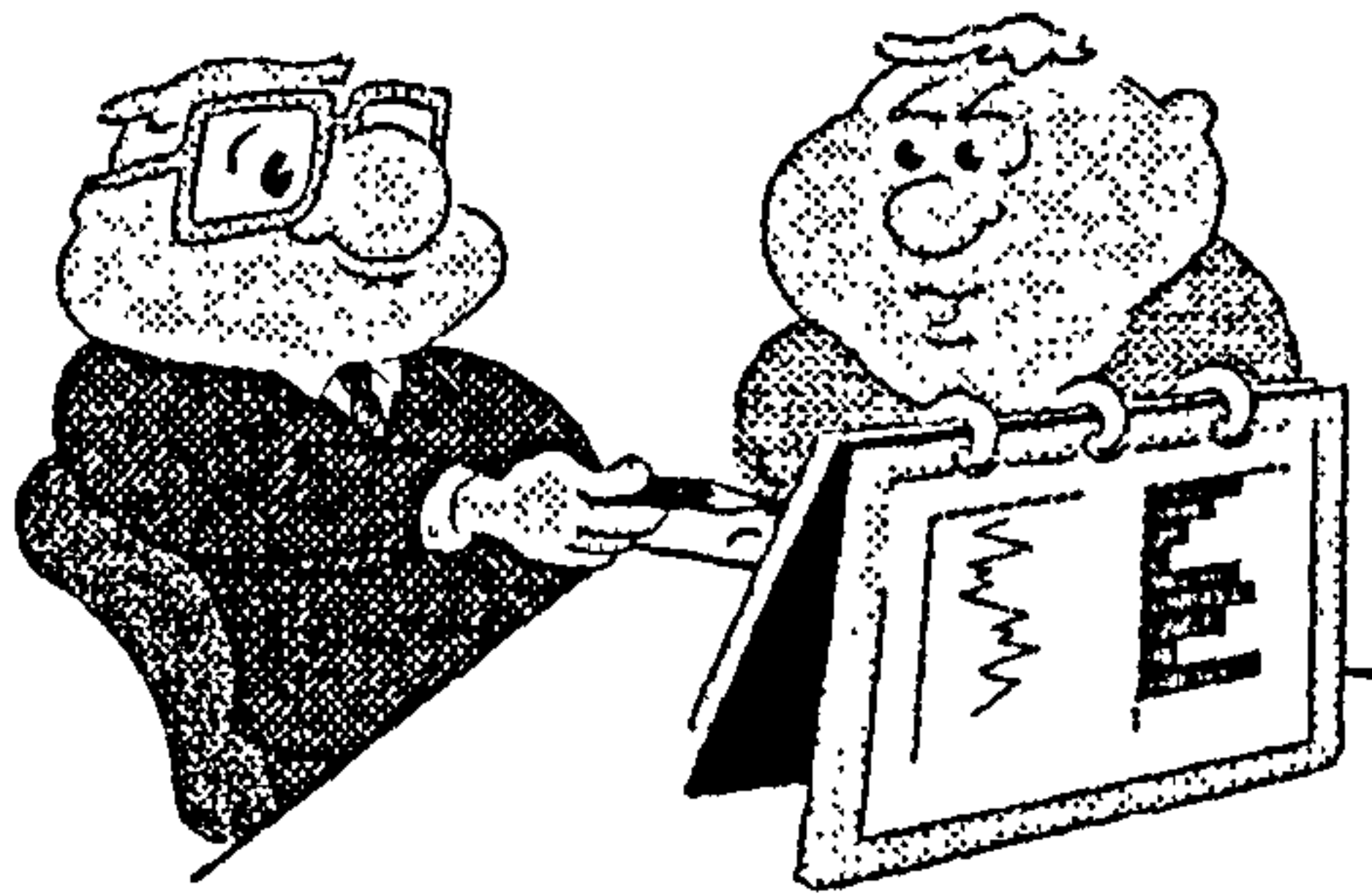
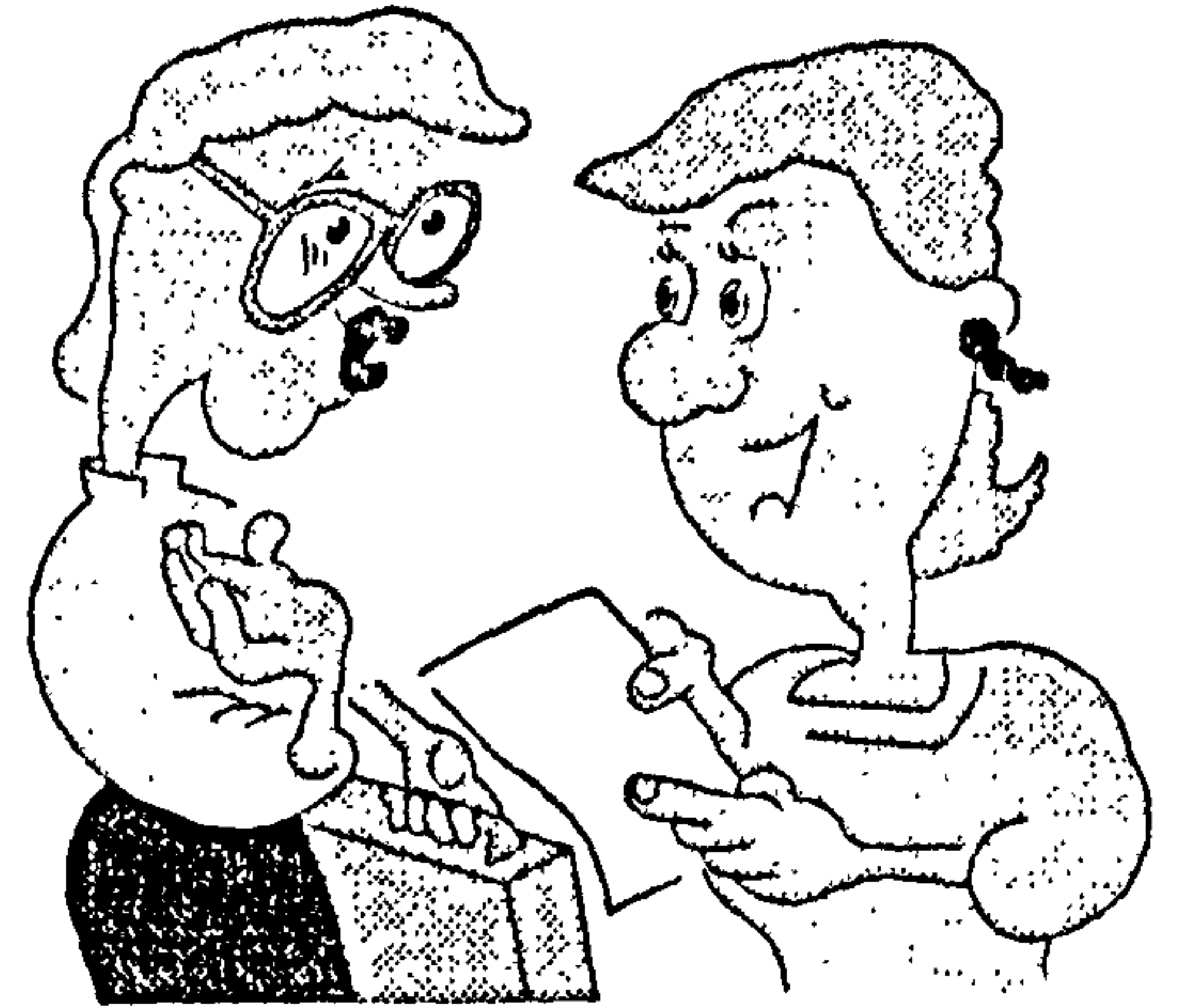


**Feedback for**  
**Appropriate**  
**Behaviour**  
**(appreciation, praise,**  
**certificates etc.)**

**may appear to have little  
effect in the short term  
but will actually teach  
new behaviour habits and  
social skills.**

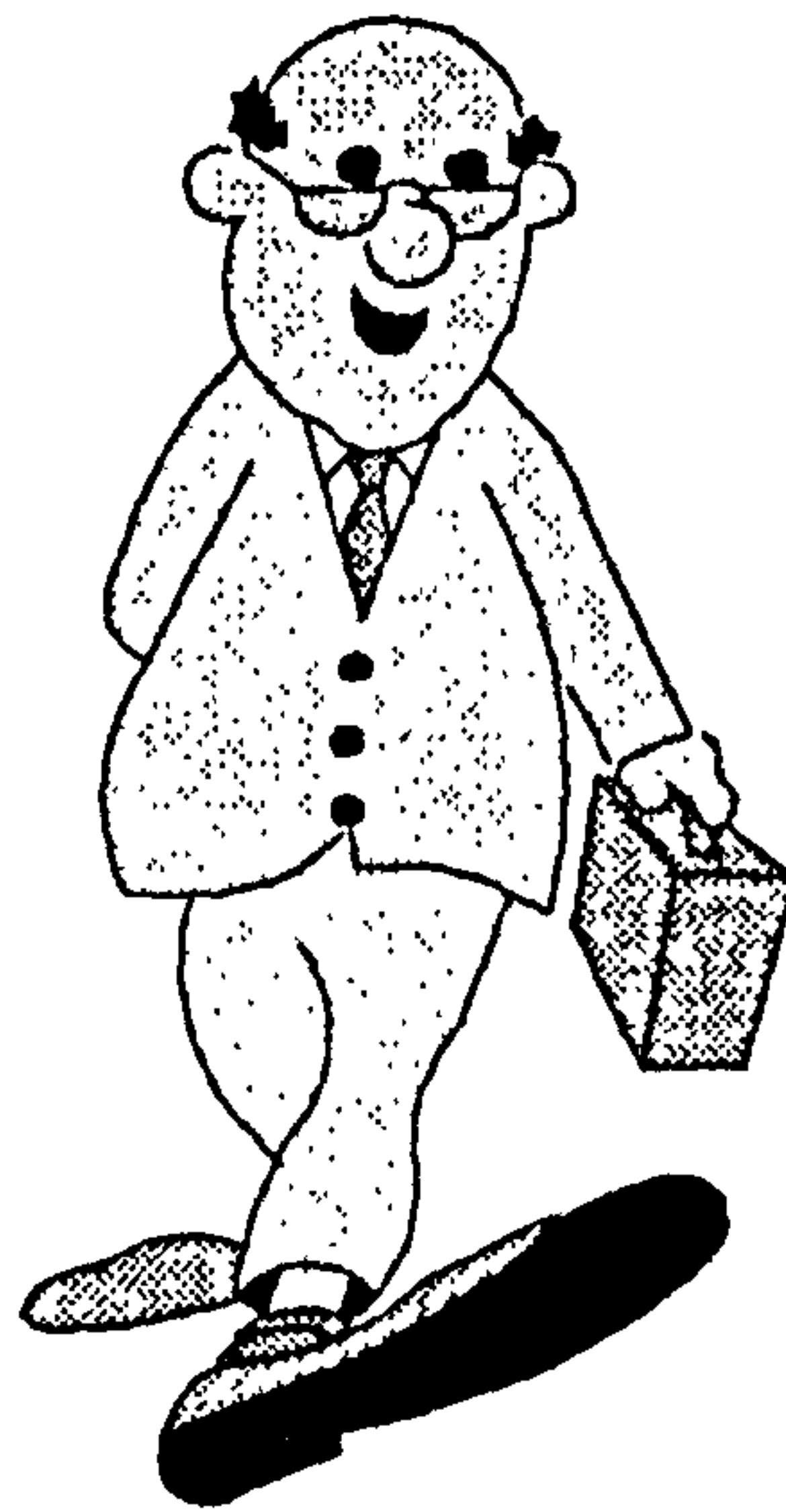
# Appropriate Feedback for Students.

**Individualized and Sincere.**

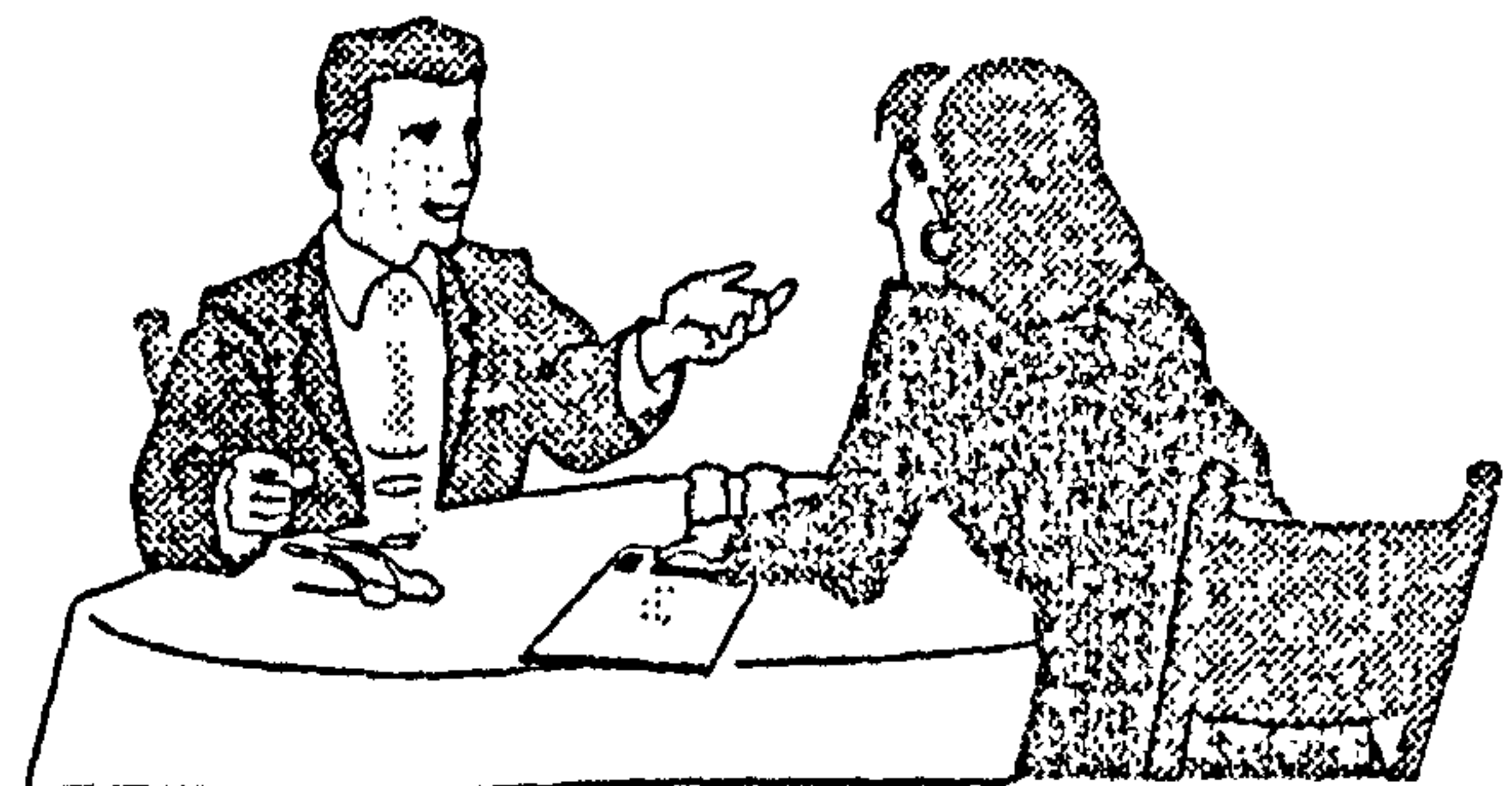


**Appropriate and Descriptive.**

**Matter of Fact.**

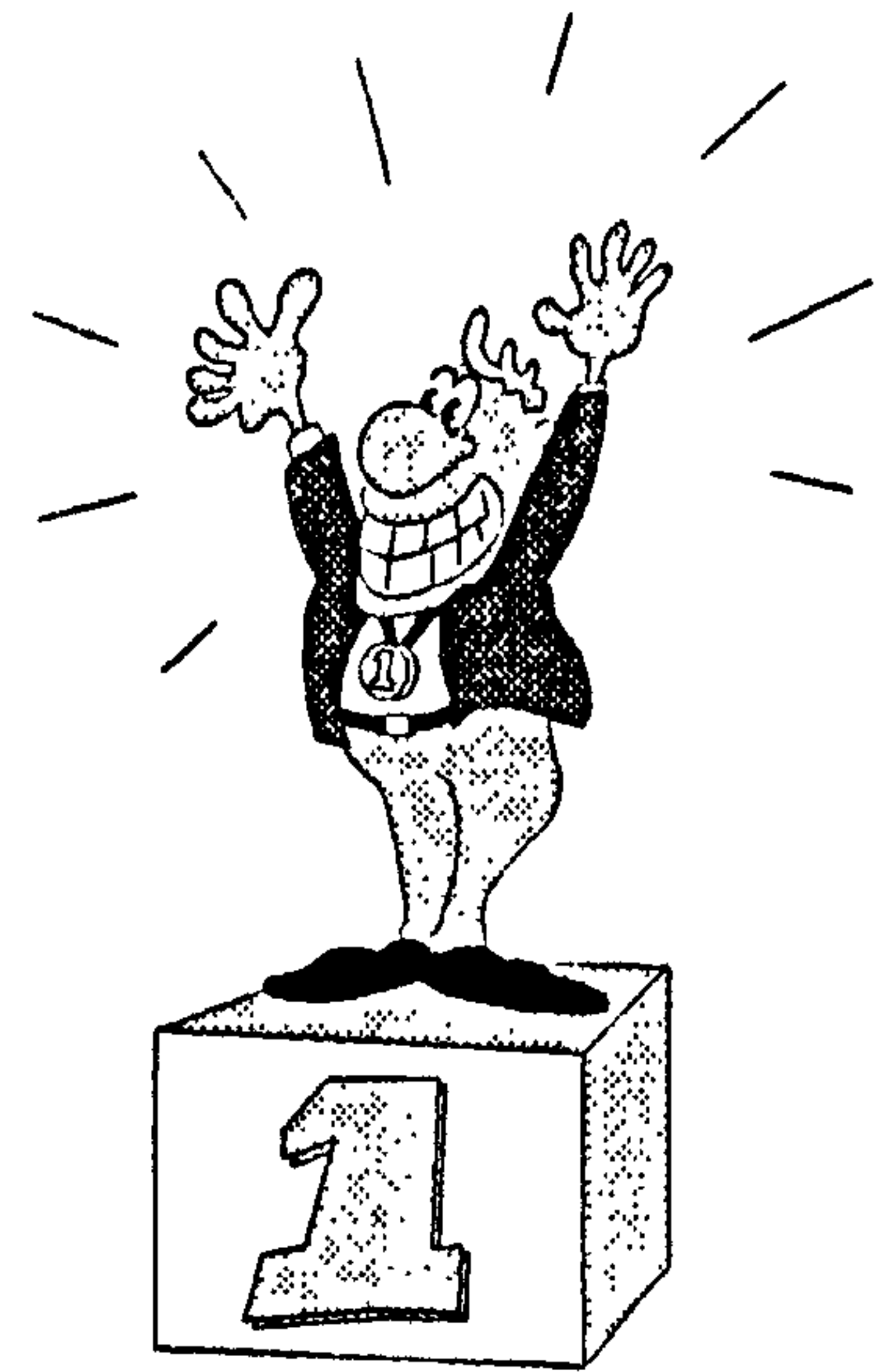


**Personal and Private.**

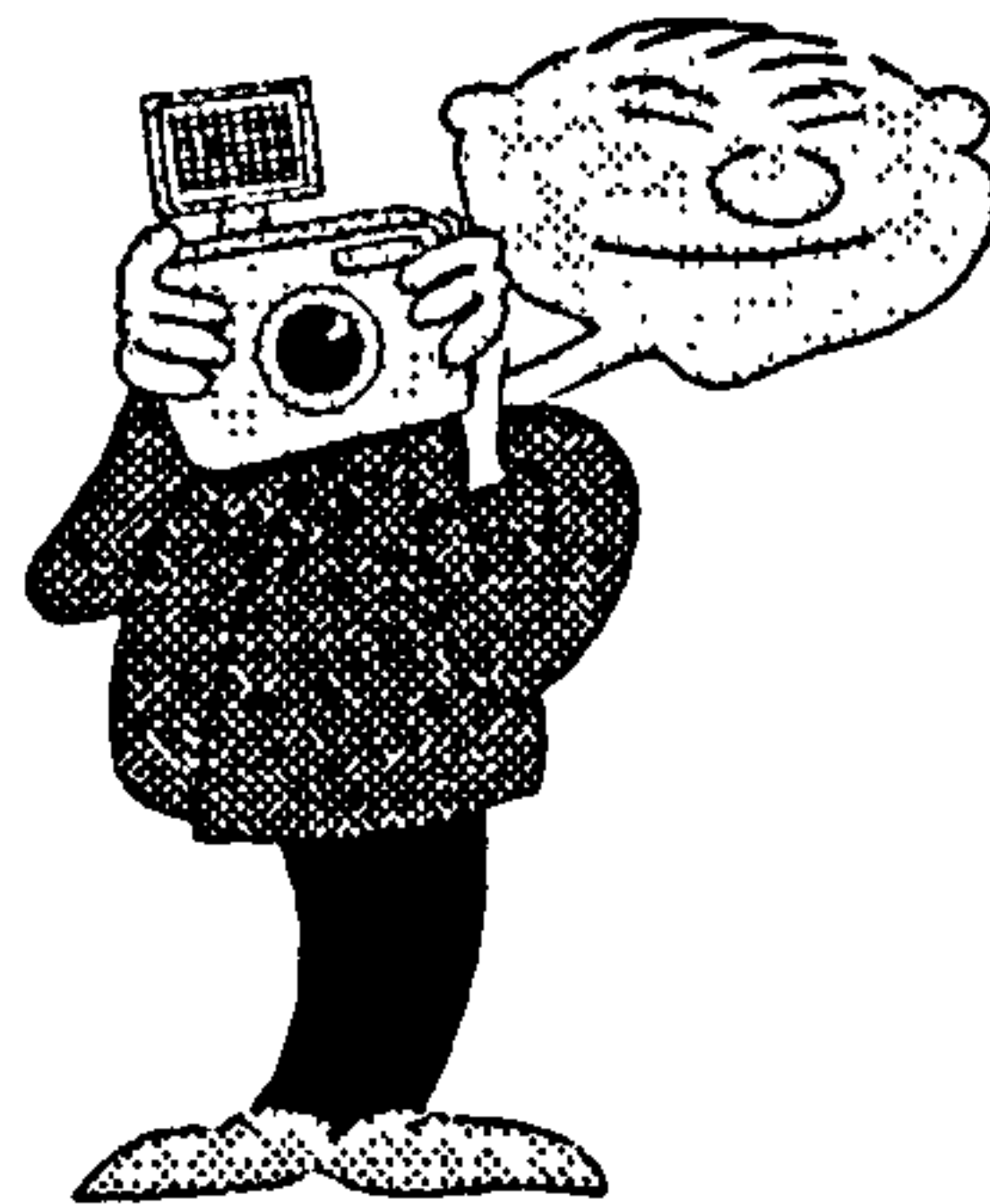


# Keeping Students on Task.

**Consistent Feedback for  
Appropriate Behaviour.**



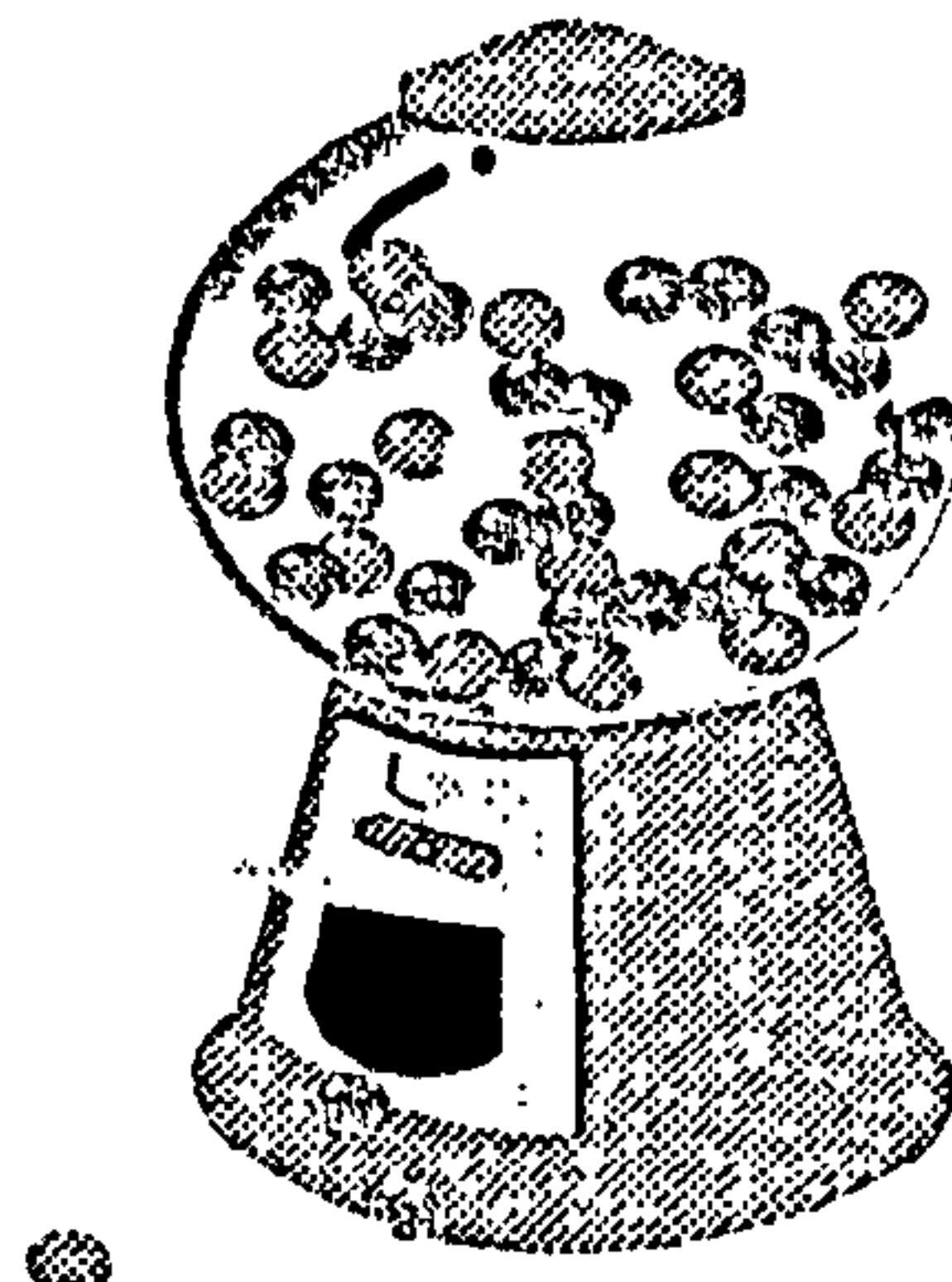
**Scanning.**



**Circulating the Classroom.**



**Class Rewards.**





**Extrinsic rewards may be**  
**counter-productive.**

**Stuart Sutherland(1992)**  
**“Irrationality: the enemy within”**

**However Sutherland acknowledges that:**

- a) Feedback is a vital element of learning.**
- b) Praise may be internalised and may function in a different way to external rewards.**

**Evidence reviewed in**  
**Lepper and Greene (1978)**

# WHOLE CLASS REWARDS

## EXTRINSIC REWARD

itself will not be effective in changing behaviour.

However, it provides a vehicle for giving the  
potentially powerful

## INTRINSIC REWARD

of

## POSITIVE FEEDBACK.

# 4

**Change the frequency of  
the feedback**

**to suit each situation**

**i.e. more**

**feedback**

**for**

**appropriate behaviour**

**at the beginning of a**

**lesson or new activity.**

# NON-DISRUPTIVE OFF TASK

## BEHAVIOUR

avoid recognising - inappropriate behaviour try  
the

“proximity praise” technique first.

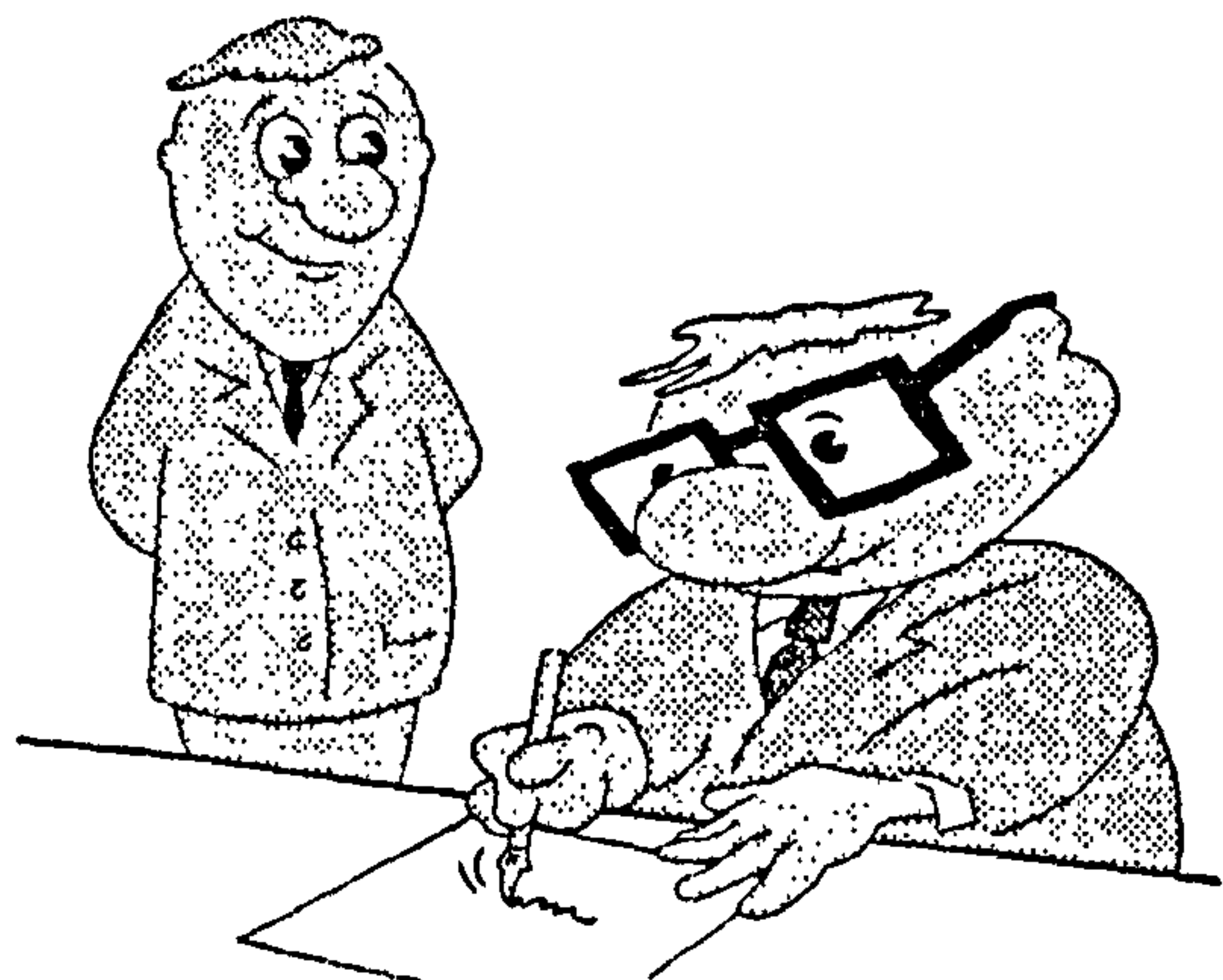


# Re-directing Off-Task Behaviour

**The look**



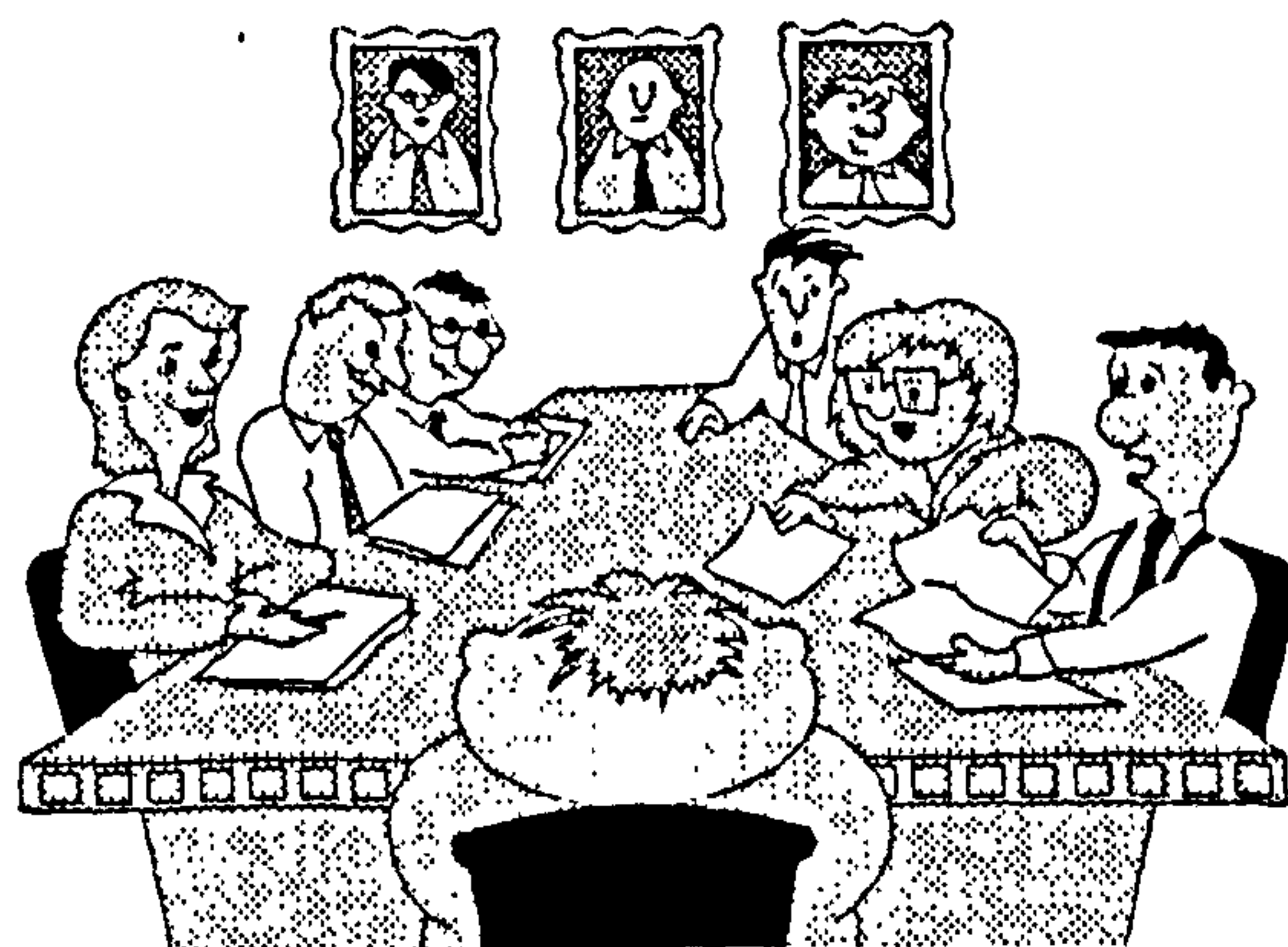
**Use names.**



**Physical proximity.**



**Proximity praise.**



**REMEMBER**  
**NEVER**  
**IGNORE**  
**DISRUPTIVE**  
**BEHAVIOUR.**



# Refocusing techniques.

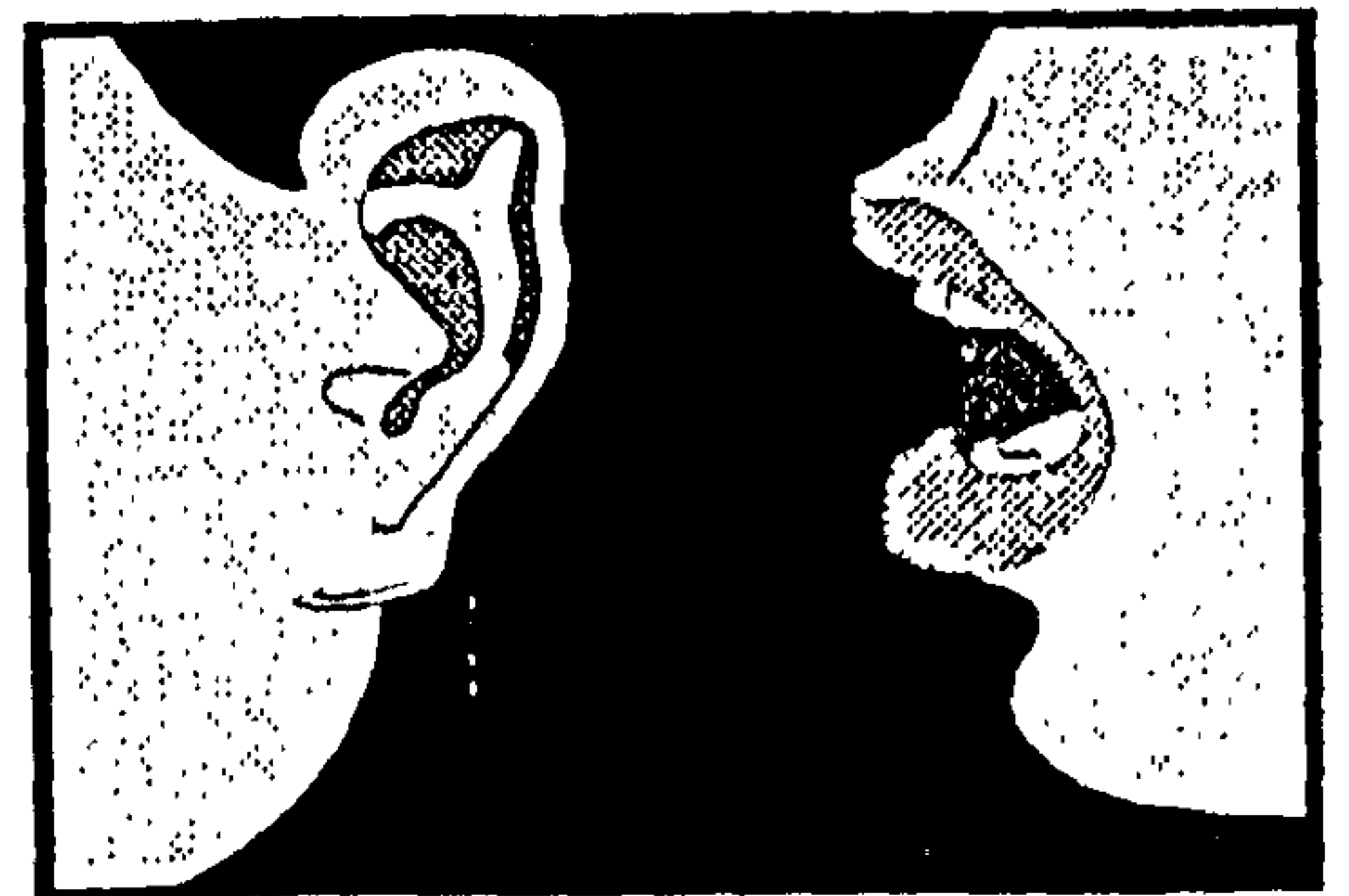


**Stay calm.**

**Focus on desired behaviour.**

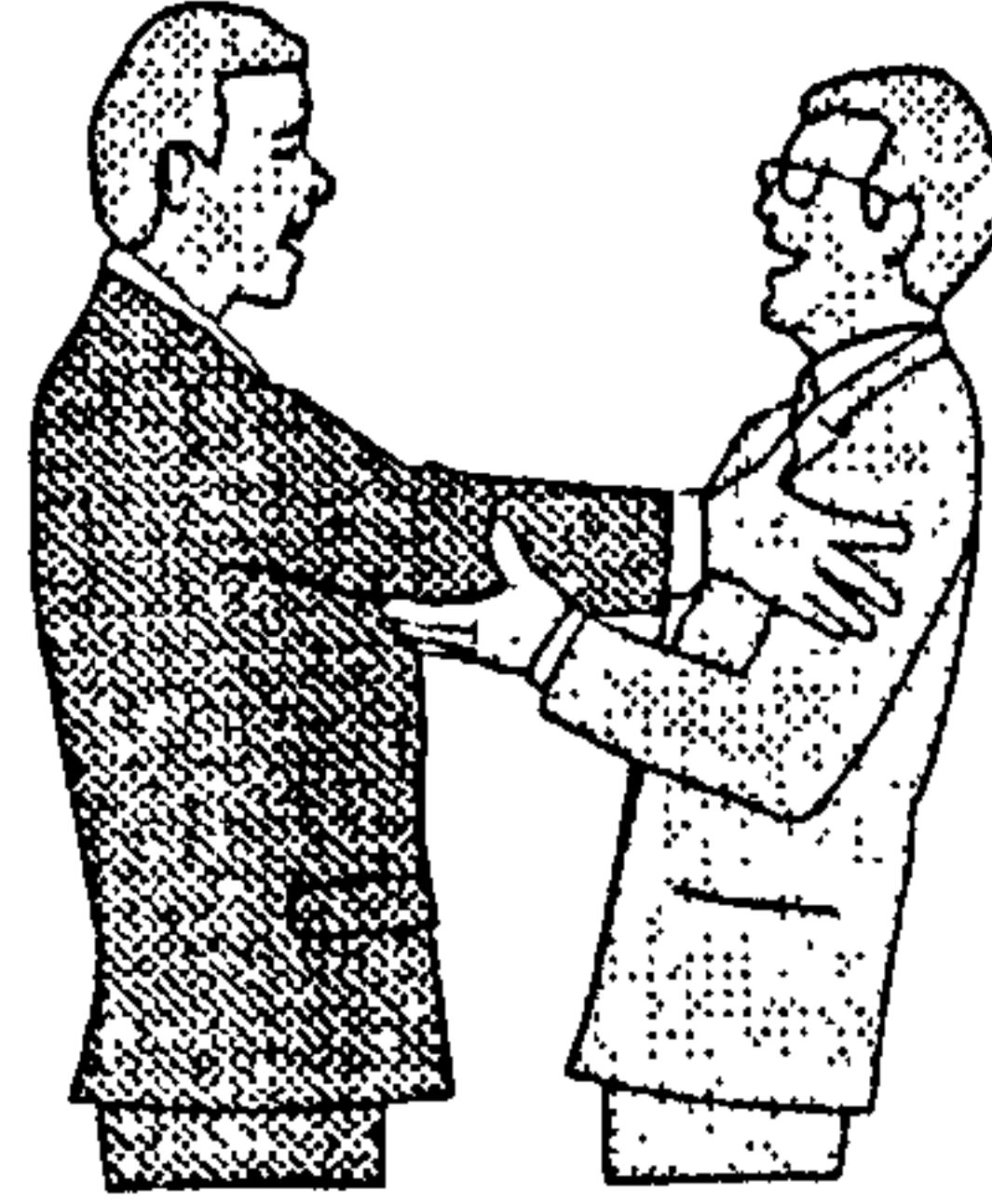


**Repeat as necessary-use the  
broken record technique.**



# Support students who continue to ignore your requirements.

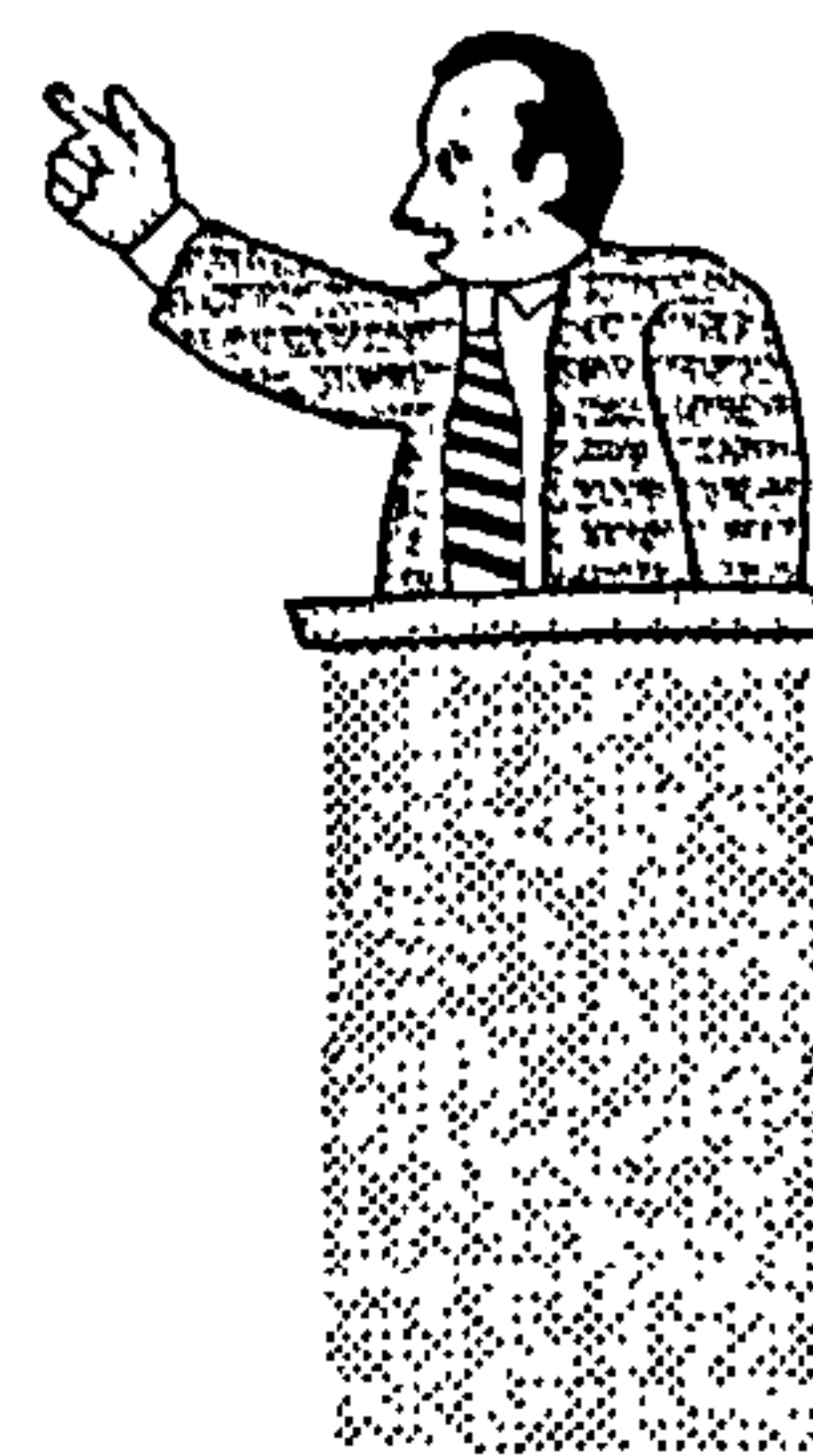
Get close.



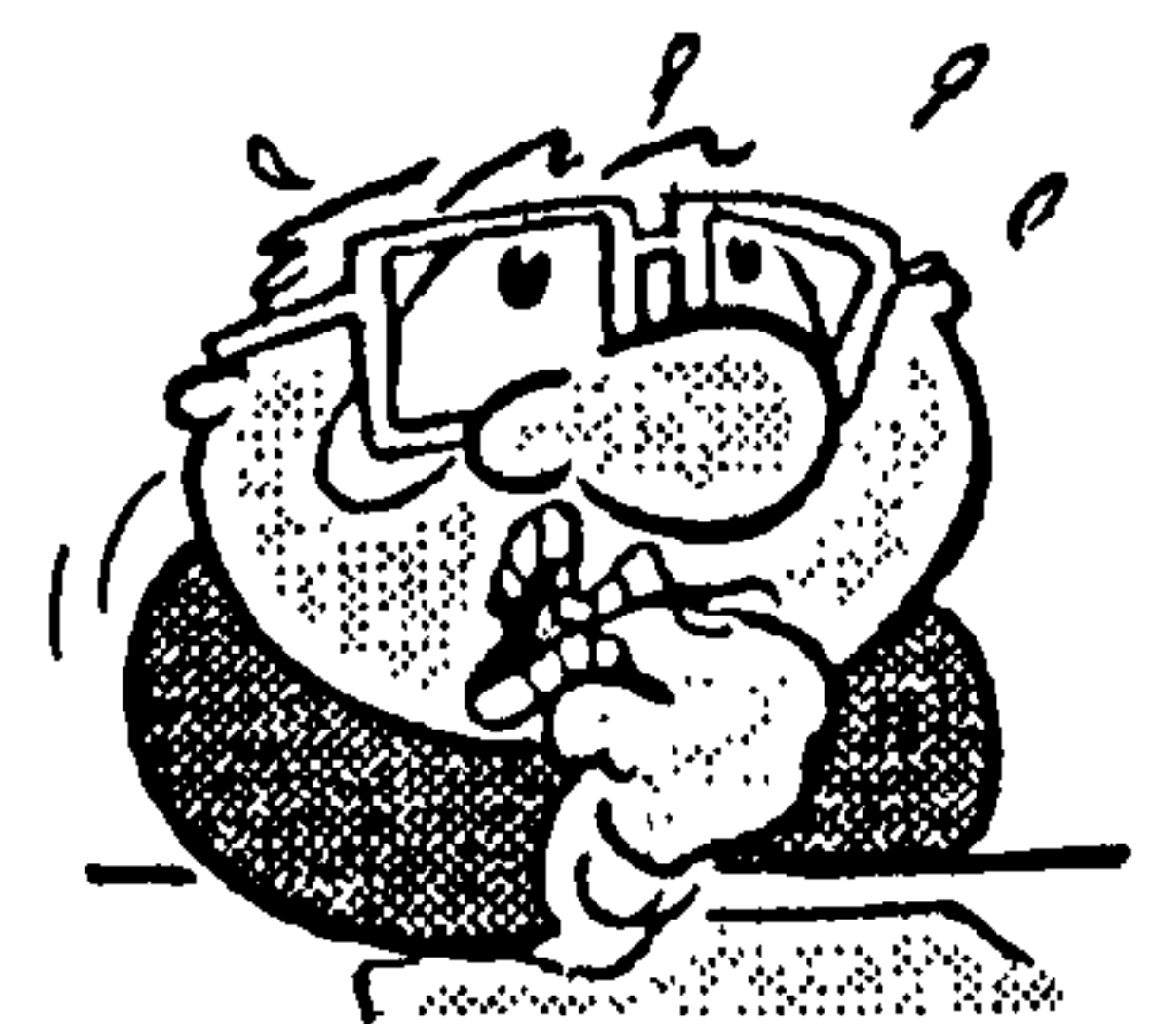
Use eye contact etc.



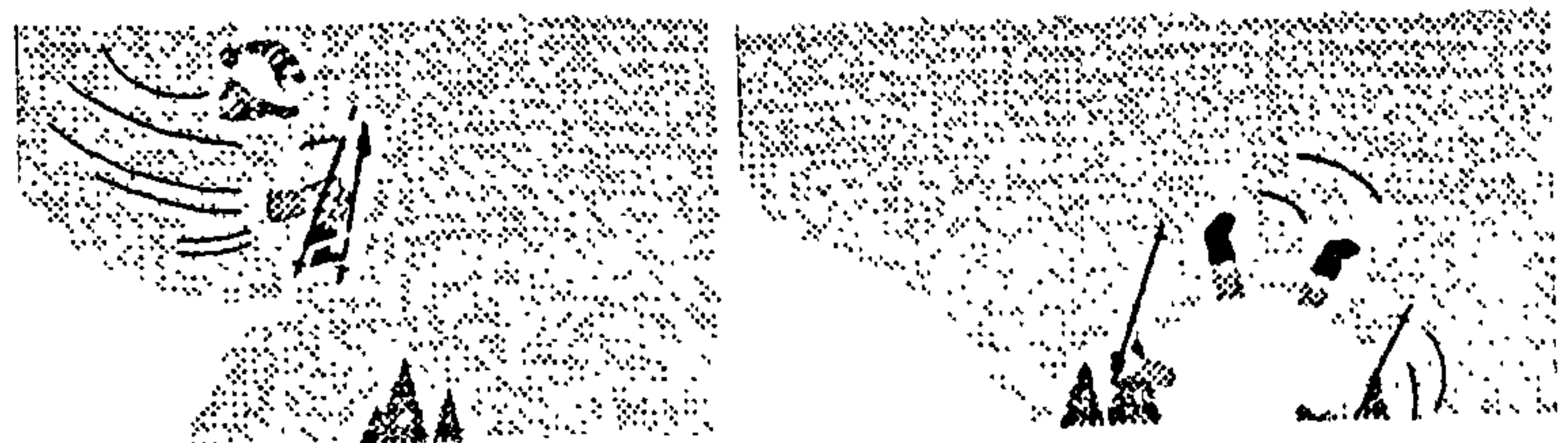
State expectations clearly and quietly.



Remind students of the consequences.



State what will happen next.





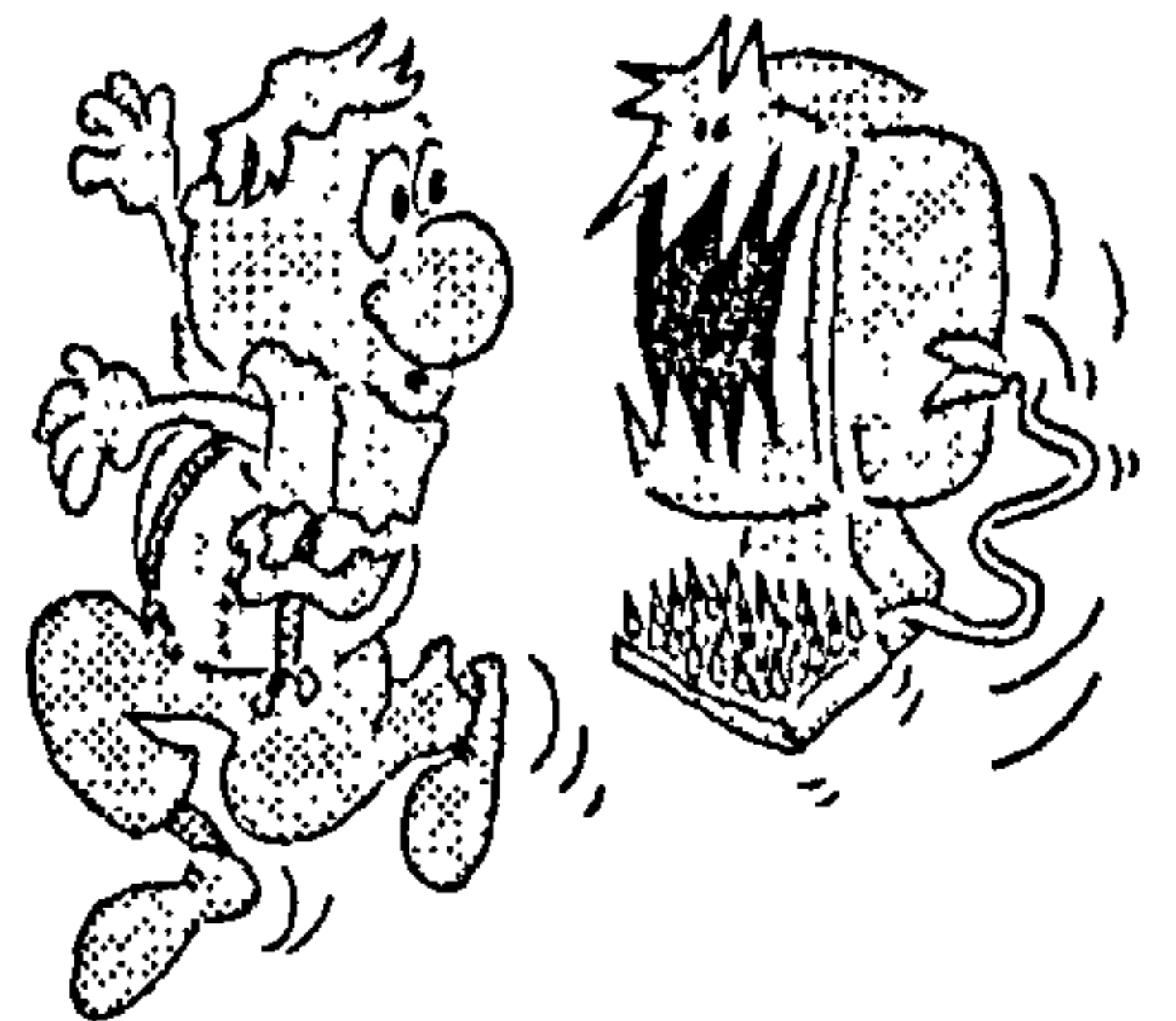
# Use the Short Circuit Criteria:

When a student:

**Willfully hurts another child.**



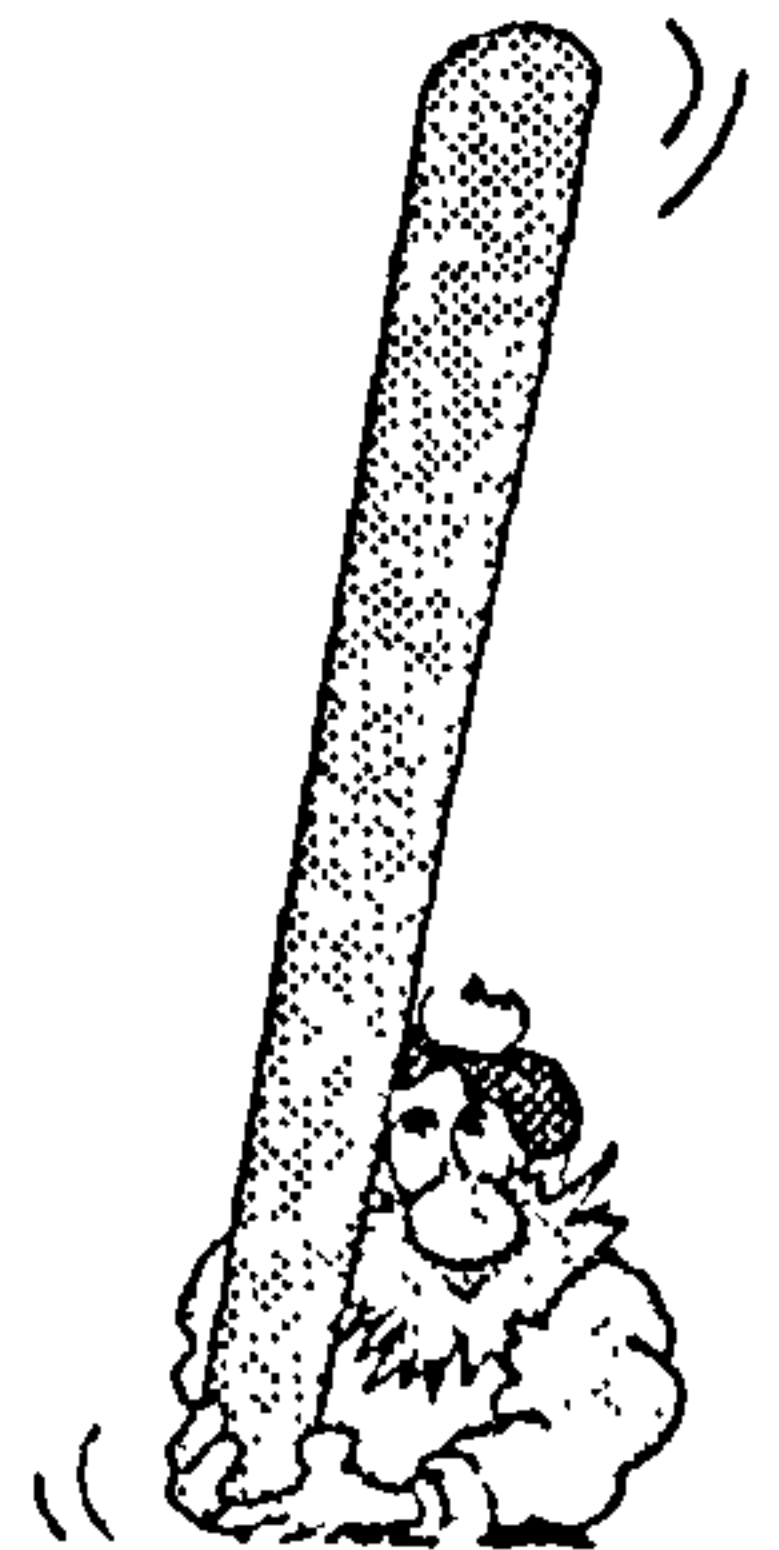
**Deliberately damages property.**



**Overtly refuses to do as he/she is told.**



**Engages in any behaviour that stops the class functioning.**



# Why should we use approval.

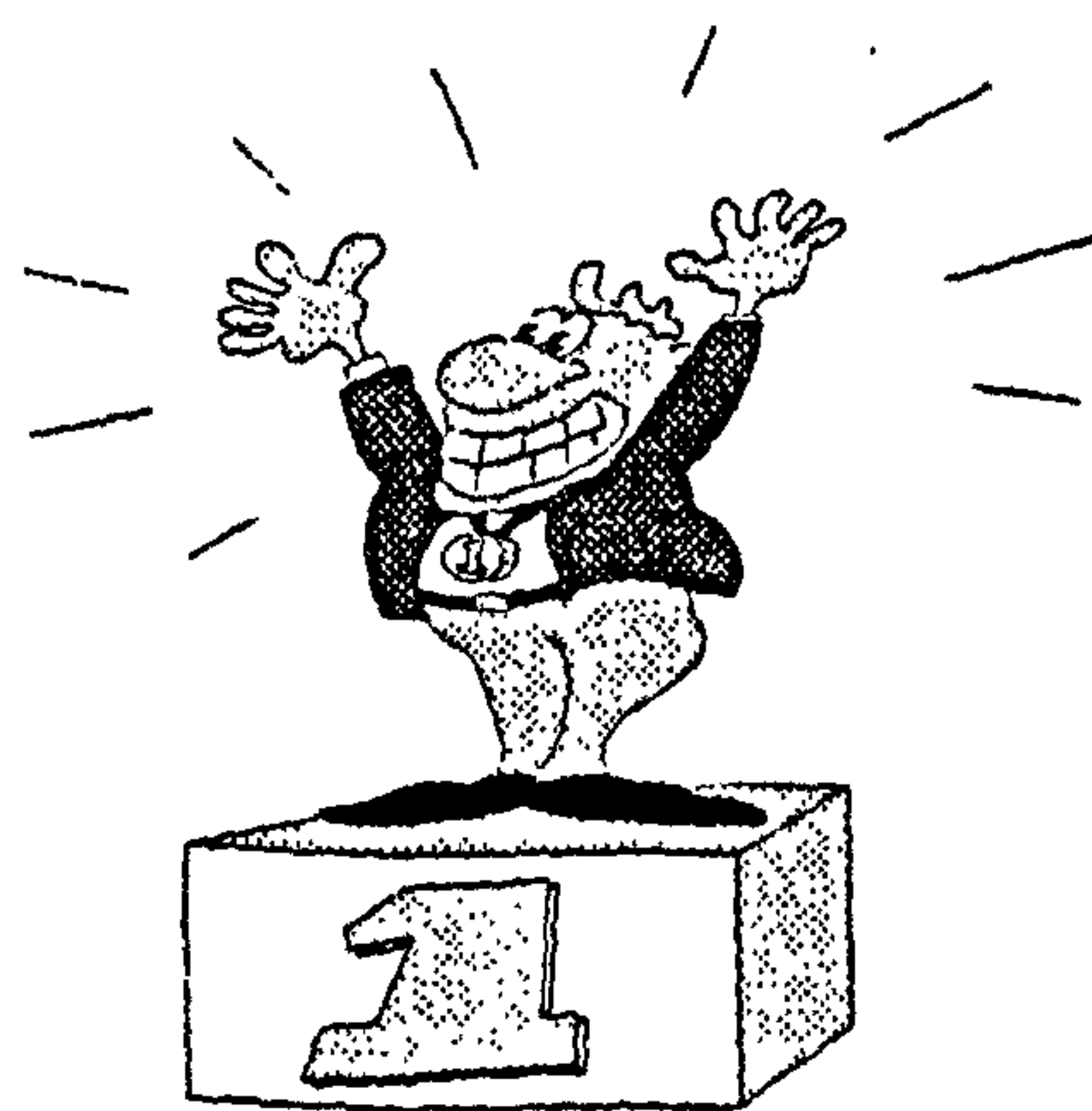
**Disapproval  
cannot teach new behaviour.**



**Disapproval  
can make behaviour worse.**



**New behaviour can only  
be taught through  
approval and feedback.**



**Remember!**

**Sanctions**

are like petrol - highly inflammable  
dangerous - only use consistently, systematically,  
predictably and dispassionately.

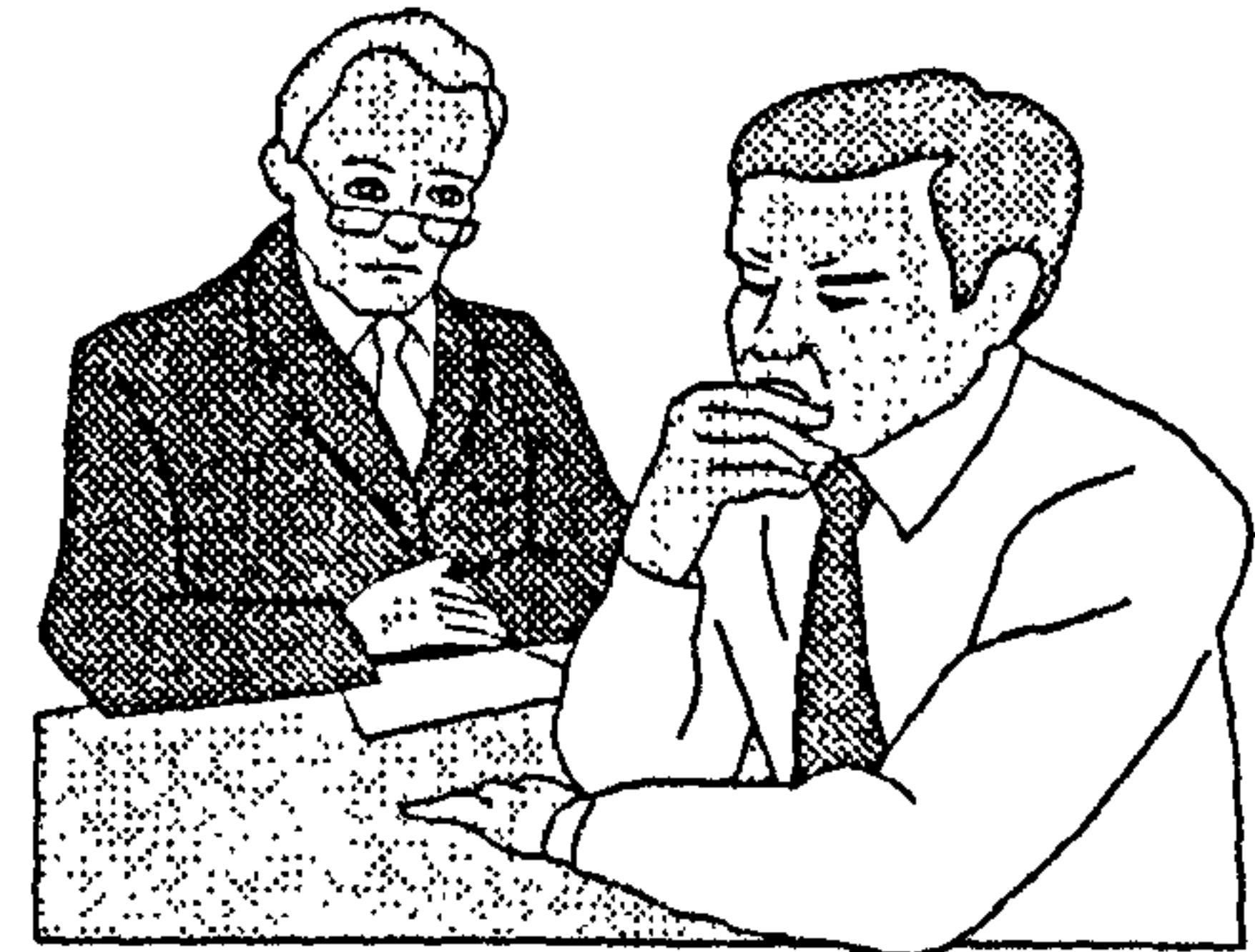
**REMEMBER!**

Telling off is not a sanction.

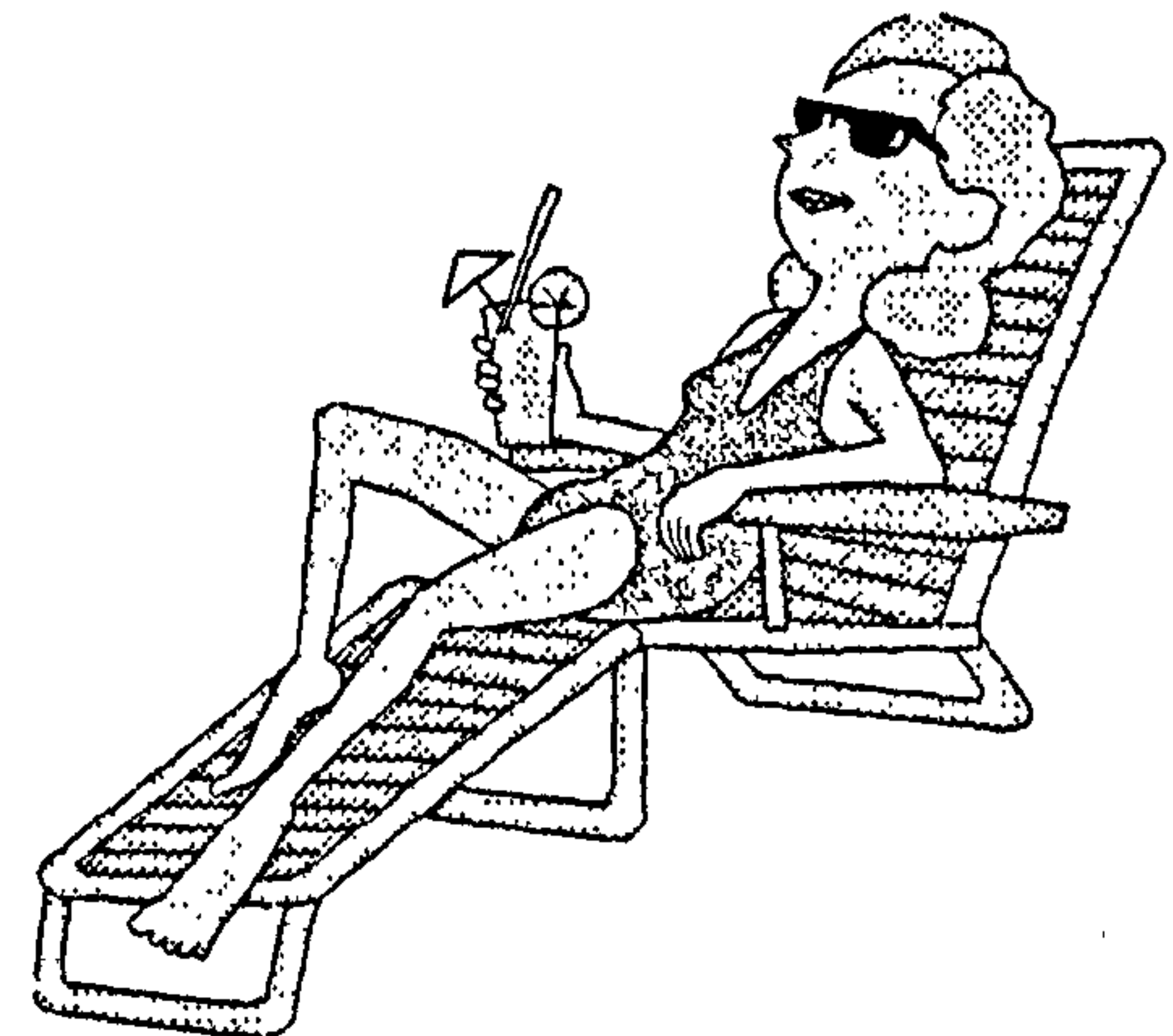


# Integrating Behaviour Management Skills

**Don't use skills in isolation.**



**Adapt to your personal style.**



**Incorporate with your teaching.**

