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The effects of anxiety on oral reading miscues

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Abstract

Anxiety is a condition which is hard to define even though everyone has experienced it to some degree and at one time or another. One problem involved in defining it is to determine whether it is a long- or short-term characteristic. This is an important point because if anxiety is a long-term personality trait we need to find out which persons are anxious, how they got that way, and how they are coping with the condition. If, on the other hand, anxiety is merely a temporary state, we need to determine during which situations the anxiety is aroused and how the persons cope with the anxiety whenever it arises.·

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Chapter 1

INTRODUCTION

Background for the Study

Anxiety is a condition which is hard to define even though everyone has experienced it to some degree and at one time or another. One problem involved in defining it is to determine whether it is a long- or short-term characteristic. This is an important point because if anxiety is a long-term personality trait we need to find out which persons are anxious, how they got that way, and how they are coping with the condition. If, on the other hand, anxiety is merely a temporary state, we need to determine during which situations the anxiety is aroused and how the persons cope with the anxiety whenever it arises.

Spielberger (1972) uses the terms A-State and A-Trait when referring to short-term and long-term anxiety. The A-State anxiety is brought on by some kind of a stimulus situation to which a person responds. The A-Trait anxiety is a more lasting personality characteristic. It is also important to note that not everyone agrees what should and should not be considered a stressful situation. Those persons who consider what most believe are nonstressful situations to be indeed quite threatening are the A-Trait anxious persons.

There are a number of situations that can arouse anxiety in the classroom setting. Adults often arouse anxiety in children since they represent authority. Teachers, therefore, can arouse anxiety in students quite unconsciously by merely representing authority in the form of an evaluator, rewarder, and a person who punishes or criticizes.

A fear of failure can arouse anxiety in students. Those who have experienced failure in school are more likely to be anxious about future situations that may produce some degree of failure than students who are relatively successful in school.

Tracking students according to their ability in a certain subject area may increase their fear of failure. Those who are placed in high ability sections experience the pressure of always having to succeed. Failure can be relative. Even praiseworthy performances when measured against one's more able peers can actually constitute failure. Those assigned to low ability classes labor under expectations that they will fail, introducing a vicious cycle of anxiety, frustration, failure, and verification of one's placement in low ability classes. Of course, other problems may be involved, but this is one possible explanation for escalating anxiety among both high and low ability students. The research of Gaudry and Spielberger (1971) demonstrates the adverse effects of higher levels of anxiety due to the cumulative effects of failure.

Gaudry and Speilberger (1971) defined high anxiety children as being self-disparaging, not very adventurous, possessing personality characteristics which are considered negative, and tending to daydream often. Usually other students in their classes, and many times their teachers, tend to dislike their personality characteristics. This, of course, makes it much more difficult for the anxiety prone children to cope with their anxiety and the social rejection they are experiencing. They see themselves as incompetent, unliked, and fearful. They are not psychologically well-equipped to deal with the ongoing tasks of the school curriculum.

Teachers often try to motivate these students to perform well by stressing the importance of the task. Naturally, with high anxiety students this has a negative effect. They tend to perform poorly on such tasks because their drive level becomes increased to a point that it interferes with their performance. This situation is particularly true when the task happens to be a test. Similarly, when a pupil's performance is open to the scrutiny of peers, there is cause for anxiety and the possibility of a diminished performance.

Need for the Study

The study presented in this paper deals with postulated detrimental effects of anxiety on oral reading, specifically on oral reading miscues. Studies have been conducted to find out how anxiety affects classroom performance in many academic areas. There has not been much research in the area

of oral reading miscues. Yet, many educators feel that oral reading miscue analysis is an effective tool in diagnosing the reading needs of students. In order for the proper diagnostic procedures to be effective, however, any factors that may influence the performance of the student must be taken into account. One factor that may enter in is the anxiety level of the student.

Purpose of the Study

The purpose of the present study was to determine how the anxiety level of students affected their oral reading performance.

Statement of the Problem

The problem under consideration deals with the number and type of oral reading miscues made by low anxious sixth grade students and those made by high anxious sixth grade students. It was hypothesized that low anxious sixth grade students make significantly fewer oral reading miscues than high anxious sixth grade students.

A competing hypothesis that was under consideration was that previous achievement as measured by the reading section of the Iowa Tests of Basic Skills was a better indicator of the number of oral reading miscues made by sixth grade students than was their anxiety level.

Definition of Terms

Miscue analysis is the term most researchers use when discussing oral reading errors. Miscues are responses in

oral reading that do not match the responses that are expected.

Seven types of behaviors were recorded during the oral reading sessions conducted by the researcher. The seven types, briefly defined are:

1. Hesitation--the student hesitated five seconds or more before reading the word orally.

2. Substitution--the student substituted another word or syllable for the printed word or syllable (hid for hide, flattered for flattering, ungamely for ungainly).

3. Omissions--the student omitted a syllable (taste for tasted, able for unable, monment for monument) or an entire word.

4. Addition--the student added a syllable (leisurely for leisure, although for though) or an entire word.

5. Repetition--the student repeated a syllable, word, or group of words. If the syllable, word, or words were repeated more than once, each repetition was counted until either the correct pronunciation was read or a mispronunciation was recorded (see miscue no. 7). The researcher did not intervene.

6. Contraction--the student said the contraction instead of the two words (I'm for I am) or read the two words instead of the contraction (did not for didn't).

7. Other Mispronunciations--all miscues that did not fall into the first six categories were recorded under this heading.

A child who experiences test and test-like situations as markedly unpleasant, tinged with at least vague feelings of uneasiness and bodily tension we shall call anxious. We will also assume that such a child is more or less aware that what he is experiencing involves unpleasantness and tension (Sarason et al., 1960, p. 11).

Limitations of the Study

One limitation of the present study was that the researcher used only the students in her classes. These students were all average or above average in reading ability. No remedial students participated in the study. This condition restricted the range of reading performances and may have had a similar effect on the level of anxiety scores.

Another limitation is that each subject read only a total of four times during the course of the study. Each passage read was 125 words in length. Thus the magnitude of the differences among subjects was limited by the number of observations.

The two scales used to determine anxiety level may not have been the most effective way to tap the characteristic and/or measure disproportionate amounts of characteristic across subjects.

The researcher was responsible for collecting the miscue observations. Experimenter bias and/or the dual responsibilities of teacher and researcher may have operated in some systematic way to influence the results.

Chapter 2

REVIEW OF RELATED LITERATURE

Studies have been conducted to examine the relationships between anxiety and classroom performance. The most consistent general finding is that high anxiety is associated with relatively low performance (Daniels & Hewitt, 1978; Spielberger, 1966; Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960). This result has been most consistently found in studies that posit an inverse relationship between level of anxiety and test performance. Most studies that have been conducted on classroom examination performance have found that low anxiety students make higher scores (Alpert & Haber, 1960; Carrier & Jewell, 1966; Gaudry & Bradshaw, 1970; Marso, 1970). This is not to say that there have not been conflicting results. Prociuk and Breen (1973) demonstrated that academic achievement is significantly related to test anxiety in two ways. Test anxiety can lead to poorer performance in those who have acquired the tendency to react to such anxiety in a negative manner, such as worrying, anticipating punishment, feeling inadequate, etc. On the other hand, test anxiety can lead to better performance in those individuals who have acquired a more positive approach, such as increasing their drive level by striving to improve.

Pederson (1970) has stated that when high test anxious (HTA) students are in a situation where no stress is on them

they can be expected to do as well, or better, than low test anxious (LTA) students. Also, some subjects may not be aroused by test anxiety if they feel that the test will not be used in determining their grades (Szetela, 1973). However, often the reverse is true when the subjects know that test scores will be used to decide their grades (Daniels & Hewitt, 1978). Studies by Sarason et al. (1960) have further documented the adverse effects of evaluative situations upon the performance of high anxious students.

A study by Liebert and Morris (1967) sheds light on the way test performance is influenced by the manner in which the individual tries to cope with anxiety. Some HTA subjects divide their attention between self-stimuli, such as worry, and task stimuli in evaluative situations. Since worry demands attention, it can divert the subject's attention from the task stimuli and thus lower the performance.

Dusek, Mergler, and Kermis (1976) also found that high test anxious subjects have a problem focusing their attention on task-relevant stimuli. Hence the HTA student's central task performance is lower than that for the LTA student. Task-irrelevant stimuli also seem to attract the attention of HTA students more than LTA students. This suggests that selective attention is a psychological process at the bottom of the performance problems of HTA students.

Hill (1974) conducted research in which he found that anxious students spend quite a lot of time off-task, especially in a verbal learning situation. This off-task

behavior is directly related to poor performance of the task. Nottelmann (1975) also reported that high anxious students were observed to engage in more off-task behavior and more glancing away from their task than less anxious children, thereby resulting in poorer performance.

The effects of test anxiety may be cumulative (Dusek, Mergler, & Kermis, 1976). Data suggest that as HTA students advance from one grade level to another they fall further and further behind in their ability to learn and utilize beneficial strategies for successful performance on increasingly more difficult tasks.

Researchers have suggested (Hill & Sarason, 1966; Sarason et al., 1960) that the HTA student's strong reliance on adult evaluation and support may compound the effects of test anxiety for these students. Hill (1967) also indicates that approval from adults is quite a strong incentive for HTA students when their dependency needs and anxiety about being evaluated have been increased by failure.

In conventional tests the test anxious student's performance is affected primarily by cues which tell him that he is in a dangerous situation because he is being evaluated by an authority figure. Sarason et al. (1960, pp. 157-158) states that in testing situations where such cues are minimal, the test anxious student's performance will be affected little, if at all.

Similar cues that can arouse anxiety in a testing situation can also be present in test-like situations. Sarason et al. (1960) stated that the test anxious child

could be expected to be anxious in many situations. Studies which investigated the relationship of anxiety to performance show that high anxious subjects differ from low anxious subjects to the degree in which their performance is disrupted in situations where there are conditions of personal threat or stress. Some of these stressful conditions have been introduced by motivating instructions which contain threatening or evaluative elements or reports of failure (Sarason, 1959, 1960, 1961).

If group situations are perceived as being more evaluative, competitive, or generally more threatening than working alone, HTA subjects would be more detrimentally affected in these group situations than LTA subjects. Ganzer (1968) researched the relationship of test anxiety to an audience presence in a learning situation. He found that observers were detrimental for the high and middle anxious subjects but not the low anxious subjects. Pederson (1970) also found that group membership had a detrimental effect on the high and middle test anxious subjects while having a facilitative effect on low test anxious subjects when doing performance tasks.

A group situation which can be considered test-like is reading orally for a teacher and other students in a classroom. The teacher represents the authority figure which may signal danger to the student. The other students in the classroom may also provide a stimulus for additional anxiety. The present study is concerned with this type of test-like situation.

The researcher was unable to find any other studies that deal with the test-like situation investigated in the present study. Despite this fact, the researcher feels there is a need for such a study. The need arises out of the commonness of the situation and the detrimental effects of judgmental errors that can occur in this situation. The writer is referring to the practice of forming oral reading groups to monitor the developmental reading skills of children and the complementary procedure for diagnosing the remedial needs of pupils that can be addressed in this situation.

The small reading group has long been an instrument for practicing, diagnosing, and remediating reading skills. In recent years teachers have adopted miscue analysis as a tool for diagnosing the needs of students in the area of reading instruction. Little attention has been devoted to the factors that might elevate the type and magnitude of the errors, aside from those that might be attributed to deficient reading skills. The anxiety level of the student is hypothesized to be one such factor.

Miscue analysis, like many other evaluation procedures, when applied uncritically, may do more harm than good. Certainly when errors are treated without regard to their antecedents, the potential for progress may be curtailed. Guszak (1978) has pointed out that error counting may not be as important as determining the reasons for the miscues. The reasons for the miscues may be numerous, but one consideration is the student's anxiety level. Determining

in advance whether the student is high anxious or low anxious may help in the analysis stage of the oral reading diagnostic process. The purpose of the present study was to determine possible relationships between the student's anxiety level and oral reading miscues.

Chapter 3

METHOD

Subjects

Out of 49 students in the researcher's two sixth grade language arts classes, 10 were identified as high anxious and 10 were identified as low anxious after having been administered the General Anxiety Scale for Children (GASC) (Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960) and the Test Anxiety Scale for Children (TASC)/ (Sarason et al., 1960). From this group of 20 students, two transferred to different classes and two were dropped from the study to compensate for those who transferred. Sixteen students participated in the entire study. There were eight students in the high anxious group and eight students in the low anxious group.

Appendix

Materials

The GASC and TASC were used to identify the high anxious and low anxious students. A checklist was devised by the researcher to record the number and type of oral reading miscues made by each student. The text used for the study was Scott, Foresman's Language and How to Use It-Book Six (Schiller, Monroe, Nichols, Jenkins, & Huck, 1969).

Procedure

The TASC and GASC were administered to the researcher's

two sixth grade language arts classes by the resource room teacher. The resource room teacher then ranked the scores on each test. Next she computed the average rank score for each student. From this she determined which 10 students ranked the highest and which 10 students ranked the lowest. The resource room teacher gave a list of these 20 students to the researcher, but she did not indicate which students were classified as high anxious and low anxious in relation to the other students' scores on the two tests. Only those 20 students whose names appeared on the list were to participate in the study.

A checklist was devised to record the number and type of oral reading miscues that each student made. On the checklist there were also spaces to record the number of the passage that was read and the date of the reading.

Passages of exactly 125 words were marked off in the researcher's copy of the text used in the study. Each passage was assigned a number so that it could be recorded on the checklist when being read by a student. Even though the student may have read more than 125 words, the researcher recorded only the miscues made on the previously marked off passage. By using this method, the researcher attempted to equalize the miscue possibilities.

The 125 word passages were randomly assigned to the students so that each would have an equal opportunity to read the passages for that day.

As part of the normal classroom procedure, the students took turns reading aloud while the researcher recorded the miscues on the checklist. Two students dropped out of the study because they were transferred to other classrooms. Both of the students who had been transferred were classified as high anxious. To compensate for this, two low anxious students were also dropped from the study. The low anxious students who were dropped were in the same relative positions as the two high anxious students on the anxiety level rankings. The remaining 16 read a total of four times over the course of five weeks. It should be noted that eight of these students were in a class with 14 other students who were also reading orally, and eight students were in a class with 17 other students who were also reading orally. The researcher only recorded the miscues made by the 16 students assigned to the study.

The checklist used by the teacher made provisions for recording seven kinds of miscues: hesitations, substitutions, omissions, additions, repetitions, contractions, and other mispronunciations. The definition for each miscue was included in the first chapter of this paper.

After the miscue data had been collected, the researcher recorded the reading scores from the Iowa Tests of Basic Skills (ITBS) for each subject in the study. These tests had been administered approximately five months prior to the study by homeroom teachers.

Chapter 4

RESULTS AND ANALYSIS

Sixteen subjects were selected to participate in the study on the basis of their responses on the Test Anxiety Scale for Children (Sarason et al., 1960) and the General Anxiety Scale for Children (Sarason et al., 1960). Eight of these subjects were classified as high anxious and eight were classified as low anxious. Each subject read four passages orally while the researcher recorded the oral reading miscues that were made. Each passage was composed of exactly 125 words. After collecting the data, it was found that the high anxious (HA) students made a total of 115 miscues while the low anxious (LA) students made a total of 80 miscues.

Repetitions made up 60% of the total miscues for both the HA and LA combined. HA students made 75 repetitions and the LA students made 42 repetitions. After deleting the repetitions, the total number of miscues for the HA was 40 and for the LA it was 38.

Substitutions made up 12% of the total miscues for both the HA and LA combined. HA students made 14 substitutions and the LA students made 10 substitutions.

Omissions made up 9% of the total miscues. The HA made 9 omissions and the LA made 8 omissions.

Additions made up 6% of the total miscues. The HA made 3 additions while the LA made 9 additions.

Other mispronunciations made up 11% of the total miscues. The HA made 13 other mispronunciations and the LA made 9.

Only one contraction miscue was recorded and it was made by an HA student.

Two hesitations were recorded and both were made by the same LA student.

The average grade equivalent score on the reading test of the ITBS for the HA group was 72. The average grade equivalent score for the LA group was 75.

No statistical significance was found between anxiety level and number of miscues using the chi square test (see Table I). The minimum value needed in order to obtain a significant result at the .05 level is 3.84. The cells in Table I contain frequencies which are too similar for a significant relationship to exist between them.

Table II shows that no statistical significance was found between reading grade equivalent scores and number of miscues. Again the chi square test was used.

No statistical significance was found between anxiety level and number of miscues using the Mann-Whitney U test (see Table III). The regular method of computing the Mann-Whitney U for small samples was used. First, all the scores in both groups were ranked together. The lowest score was ranked 1. The ranks for the HA were summed. This sum is

TABLE I

Anxiety Level	Errors: High	Errors: Low	Total
High	A 5	B 3	8
Low	C 3	D 5	8
Total	8	8	16

$chi^2 = .25$

TABLE II

Rdg. GE (ITBS)	Errors: High	Errors: Low	Total
High	A 4	B 4	8
Low	C 4	D 4	8
Total	8	8	16

$chi^2 = 0$

TABLE III

High Anxiety, N_1=8		Low Anxiety, N_2=8	
Score	Rank	Score	Rank
2	1	6	2
10	6	7	3.5
11	7.5	7	3.5
13	10.5	9	5
14	12	11	7.5
16	14	12	9
19	15	13	10.5
30	16	15	13
	82=R		

p=.080

$$U = N_1 N_2 + \frac{N_1 (N_1 + 1)}{2} - R = 18$$

called R. After applying the formula listed under Table III, the value of U was computed to be 18. This value was then found in a Mann-Whitney U table and the probability was found to be .080.

Even though the LA students did make fewer miscues than the HA students, it was not by a very wide margin. The LA made 41% of the total number of miscues.

One student in the HA group made 30 miscues while the average number of miscues for the HA was only 14. If this student's score was lowered to 14, the results would change significantly. The LA then would have made 45% of the total number of miscues.

Interestingly enough, the student mentioned in the previous paragraph who made 30 miscues also had the lowest grade equivalent (GE) score for the entire group of both HA and LA on the ITBS. The GE recorded for this student was 49. In this student's case perhaps anxiety level did not have as much to do with the number of oral reading miscues as did prior achievement in reading as measured by the ITBS. Of course, it is possible that the performance level on the ITBS is affected by anxiety as well.

It is also interesting to note the large number of repetition miscues that were recorded. The HA students made 64% of the repetitions. One explanation for this could be that they may have been more concerned with correct pronunciation than the LA students, so they made more attempts at self-correction. Recht (1976) says that perhaps self-correction should actually be considered as a positive

indicator that the reader is comprehending. This imples that self-correction is evidence of the reader's successful interaction with the text. Yet, the reason for repetition of a word could mean other things as well. Perhaps the reader wants to stall for more time if the word is being closely followed by an unknown word. To save himself from embarrassment the reader may try to figure out this unknown word while repeating a word preceding it. Possibly the anticipation of the next unfamiliar word interferes with concentration; the reader merely loses his place and has to repeat a word or phrase in order to get himself back on the track. This implies that perhaps task-irrelevant stimuli were interfering with the oral reading process.

Only two hesitations may have been recorded because of the way this type of miscue was defined for the study. It was defined as an error when the student hesitated five seconds or more before reading the word orally. If this miscue was defined in terms of a lesser amount of seconds the researcher could have recorded it as an error more often. This may have altered the results significantly.

The classification for contractions could have been deleted entirely. The possibility for this miscue was very remote. A contraction was contained in only ten of the passages. So it is easy to see why only one contraction miscue was recorded. This suggests that reading material might be more selectively chosen so as to increase the likelihood of certain errors.

One explanation for the narrow margin between number of miscues for the two anxiety groups could be that anxiety is not an influencing factor in the researcher's classroom. Perhaps without actually realizing it the researcher provides a learning environment that minimizes anxiety producing stimuli. This would explain the relatively few miscues in both groups and the narrow margin of differences between the HA students and the LA students. Neither of the tests was designed to assess a pupil's level of anxiety in a particular classroom nor was any attempt made to account for potentially anxiety arousing conditions in the classroom.

Now that the researcher knows the students quite well after working with them in the classroom for an entire school year, she can compare the results of the TASC and GASC with her own observations. In the researcher's opinion, the results of the two scales seem fairly accurate and the researcher would not change the classification of any of the students in the study.

The scales seem to be valid instruments. After ranking each subject on the TASC and the GASC and then comparing the results, it was found that the same students would be classified HA or LA on each separate scale as they were on the average ranking of the two scales. In no instance was a student ranked high on one scale and low on the other. As a matter of fact, on the average the ranks did not change over two positions.

On the TASC a student had to respond "yes" to at least

13 out of the 30 questions to be classified as HA. On the GASC the HA student had to respond "yes" to at least 24 of the 45 questions. The average number of "yes" responses for those classified as HA was 17.38 on the TASC and 31.13 on the GASC.

The researcher determined which three students were the highest among those classified as HA and which three were the lowest among those classified as LA by totaling the "yes" responses on the two anxiety scales. The three highest anxious students made 59 miscues with 39 of them being repetitions. The three lowest anxious students made 35 miscues and 15 of them were repetitions. By looking at just these six students a greater margin of difference between the number of miscues in each group can be noted. The highest anxious also made the greater percent of repetitions. Out of 59 miscues, 66% of them were repetitions. For the lowest anxious the percent of repetitions was only 43. These figures lend some support to the original hypothesis that high anxious students make significantly more oral reading miscues than low anxious students. The high number of repetition miscues leads the researcher to believe that there is possibly a connection between high anxiety and the number of oral reading repetition miscues. Some of the reasons why HA students may tend to make more repetitions have been cited previously in this paper.

Considering the amount of material read by this group of sixteen students, they did not make very many oral

reading miscues. This outcome might be attributed to the sample being drawn entirely from students who were average or above average in reading ability. The outcome might also be a function of the type of reading program these students were exposed to in grades 1-5. These 16 students were drawn from a school system that encourages and emphasizes oral reading. This may in part explain the low number of oral reading miscues made by the group regardless of their being classified as high or low anxious students.

Chapter 5

SUMMARY, RECOMMENDATIONS, CONCLUSIONS

The central problem of this study was to determine if low anxious sixth grade students make significantly fewer oral reading miscues than high anxious sixth grade students. Sixteen subjects were selected to participate in the study on the basis of their responses on the Test Anxiety Scale for Children (Sarason et al., 1960) and the General Anxiety Scale for Children (Sarason et al., 1960). Eight of these subjects were classified as high anxious and eight were classified as low anxious. Each subject read a total of four 125-word passages orally while the researcher recorded the oral reading miscues that were made. No statistical significance was found between anxiety level and number of miscues although the high anxious subjects did make 115 out of 195 miscues.

Before attempting to repeat a study of this kind, the researcher would consider making several changes. One change would be on the recording of the hesitations. For the present study the researcher did not record a hesitation miscue until the subject hesitated at least five seconds. Many more hesitation miscues may have been recorded if the time requirement had been reduced to three seconds.

Only four oral reading samples were collected for the present study. Perhaps significant results could have been

obtained if each child were required to read more selections. Also, only a small number of subjects participated in this study, possibly restricting the range of possible outcomes.

Significant results may have been obtained if the researcher had used reading materials which were more difficult. Using material above the subjects' grade level might have produced more anxiety and thus increased the number of miscues.

Another part of the study that the researcher would change has to do with the scales that were used to determine the anxiety level of the students. These scales had only one question which dealt directly with oral reading. The researcher would include additional questions regarding oral reading and how the student feels about reading in front of other students and the teacher.

One very frustrating aspect of the present study for the researcher was the number of practice trials needed in order to accurately record the miscues. It was also difficult to be both teacher and researcher. Many of the record sheets had to be discarded because the researcher could not always keep an accurate count of the errors due to interruptions and disruptions in the classroom. If the teacher and researcher were two separate people, the teacher could handle the interruptions and the researcher could continue recording miscues.

If this study would have been conducted in a laboratory setting with a researcher that was not also the teacher,

differing results might have been obtained. A teacher often does things in the classroom which tend to reduce or minimize anxiety. The teacher may do these things consciously or unconsciously. For example, a teacher may give non-verbal support, such as a smile, to the student who tends to be high anxious and thus reduce the anxiety level in the student. A teacher also gives verbal support by praising or encouraging the student. These types of natural and spontaneous teacher behavior would be controlled in the laboratory setting by an impartial researcher.

The environment of the researcher's classroom at the time of the present study was one in which anxiety was probably at a minimum. The researcher has always been concerned about anxiety and has tried to establish an atmosphere that does not provoke undue anxiety. During the study only one aspect of the usual setting was changed which may have elevated the anxiety level for some of the students. Usually during reading class the students read orally to only a small group. For this study, however, the researcher used a large group setting. The subjects read orally for the entire classroom. This was the only possible anxiety provoking aspect of the classroom setting that had been changed by the researcher. It would be interesting to conduct a similar study in a classroom that has an atmosphere judged to be high in anxiety provoking conditions. One might also compare the performances of pupils in two classrooms, one judged to be high and one judged to be low in anxiety arousing stimuli. This researcher is not aware of an

instrument designed to measure the presence/absence of anxiety evoking stimuli in a classroom. An instrument might be devised by sampling the practices a teacher uses that are known to increase/decrease anxiety among most pupils. A few such practices are summarized here to suggest an approach to constructing such an instrument.

There are several ways that teachers can minimize anxiety in the classroom if they feel that anxiety may be hindering the performance of their students. One method to reduce anxiety in high anxious students is the use of programmed instruction. In programmed instruction the student experiences success frequently as each new step is mastered. New information is presented in relatively small amounts, thus there is less threat involved and also a reduction of competition with other students (Gaudry & Spielberger, 1971).

Anxious students often have problems with memorization. Memory training can help these anxious students cope more effectively by providing techniques for improving their memory. Some of these techniques are learning how to use mnemonic devices, diagrams, outlines, and organizational ideas (Gaudry & Spielberger, 1971, p. 29).

For extremely high test anxious students giving open-book exams may be helpful. After a while these students may be gradually weaned from this method and be given regular closed-book exams. Another way to improve test performance of high test anxious students is to provide them with an

opportunity to make comments on the test items (Gaudry & Spielberger, 1971). Arranging test items in an increasing order of difficulty also aids the performance of the high anxious individual.

For the anxious child, how a teacher responds to inadequate performance is of great import. A teacher must avoid reinforcing the belief that failure and being accepted by others are related in any way (Sarason et al., 1960, p. 273). The teacher must help the student overcome the failures experienced in the classroom by helping him learn the needed skills for success while convincing the student that he is liked even though he may fail occasionally.

To establish a relatively anxiety-free classroom the teacher must always be trying to build up the confidence of students. One method to use is the encouragement of self-evaluation. This may involve setting up a list of goals that have been decided upon by the student with the help of the teacher and then a checklist could be devised to record progress. The long-range value of such a system is to develop a self-directed, self-aware, and confident learner (Indrisana, 1975).

Certainly research in this area has identified other connections between teacher behavior, instructional practices, and pupil anxiety. This research could be used to build an observation scale that taps the anxiety arousing potential in a classroom. Comparisons between these conditions and pupil self-reports like the one used in this study would be

one fruitful line of investigation. Pupil performance could also be studied in relation to the incidence of anxiety arousing conditions.

After completing the research for this study and preparing the paper to report the results, the researcher continues to suspect that anxiety is an influencing factor in the oral reading performance of students even though no statistical significance was found between anxiety level and number of miscues. The results were, however, in the predicted direction. It is probably unrealistic to expect a significant outcome when using such a small sample and only four readings per subject.

Perhaps anxiety did not seem to greatly affect students' performance in the researcher's classroom, but many studies do show poorer performance for those students exhibiting high levels of anxiety. The possible effects anxiety has on classroom performance is an area open for additional research. Perhaps researchers may find helpful suggestions presented in this paper to aid in their research studies.

APPENDIX A

Test Anxiety Scale for Children

1. Do you worry when the teacher says that she is going to ask you questions to find out how much you know?

2. Do you worry about being promoted, that is, passing from the _____ to the _____ grade at the end of the year?

3. When the teacher asks you to get up in front of the class and read aloud, are you afraid that you are going to make some bad mistakes?

4. When the teacher says that she is going to call upon some boys and girls in the class to do arithmetic problems, do you hope that she will call upon someone else and not on you?

5. Do you sometimes dream at night that you are in school and cannot answer the teacher's questions?

6. When the teacher says that she is going to find out how much you have learned, does your heart begin to beat faster?

7. When the teacher is teaching you about arithmetic, do you feel that other children in the class understand her better than you?

8. When you are in bed at night, do you sometimes worry about how you are going to do in class the next day?

9. When the teacher asks you to write on the blackboard in front of the class, does the hand you write with sometimes shake a little?

10. When the teacher is teaching you about reading, do you feel that other children in class understand her better than you?

11. Do you think you worry more about school than other children?

12. When you are at home and you are thinking about your arithmetic lesson for the next day, do you become afraid that you will get the answers wrong when the teacher calls upon you?

13. If you are sick and miss school, do you worry that you will do more poorly in your schoolwork than other children when you return to school?

14. Do you sometimes dream at night that other boys and girls in your class can do things that you cannot do?

15. When you are home and you are thinking about your reading lesson for the next day, do you worry that you will do poorly on the lesson?

16. When the teacher says that she is going to find out how much you have learned, do you get a funny feeling in your stomach?

17. If you did very poorly when the teacher called on you, would you probably feel like crying even though you would try not to cry?

18. Do you sometimes dream at night that the teacher is angry because you do not know your lessons?

19. Are you afraid of school tests?

20. Do you worry a lot <u>before</u> you take a test?

21. Do you worry a lot <u>while</u> you are taking a test?

22. <u>After</u> you have taken a test do you worry about how well you did on the test?

23. Do you sometimes dream at night that you did poorly on a test you had in school that day?

24. When you are taking a test, does the hand you write with shake a little?

25. When the teacher says that she is going to give the class a test, do you become afraid that you will do poorly?

26. When you are taking a hard test, do you forget some things you knew very well before you started taking the test?

27. Do you wish a lot of times that you didn't worry so much about tests?

28. When the teacher says that she is going to give the class a test, do you get a nervous or funny feeling?

29. While you are taking a test do you usually think you are doing poorly?

30. While you are on your way to school, do you sometimes worry that the teacher may give the class a test?

APPENDIX B

General Anxiety Scale for Children

1. When you are away from home, do you worry about what might be happening at home?

2. Do you sometimes worry about whether
   (other children are better looking than you are?)
   (your body is growing the way it should?)

3. Are you afraid of mice or rats?

4. Do you ever worry about knowing your lessons?

5. If you were to climb a ladder, would you worry about falling off it?

6. Do you worry about whether your mother is going to get sick?

7. Do you get scared when you have to walk home alone at night?

8. Do you ever worry about what other people think of you?

9. Do you get a funny feeling when you see blood?

10. When your father is away from home, do you worry about whether he is going to come back?

11. Are you frightened by lightning and thunderstorms?

12. Do you ever worry that you won't be able to do something you want to do?

13. When you go to the dentist, do you worry that he may hurt you?

14. Are you afraid of things like snakes?

15. When you are in bed at night trying to go to sleep, do you often find that you are worrying about something?

16. When you were younger, were you ever scared of anything?

17. Are you sometimes frightened when looking down from a high place?

18. Do you get worried when you have to go to the doctor's office?

19. Do some of the stories on radio or television scare you?

20. Have you ever been afraid of getting hurt?

21. When you are home alone and someone knocks on the door, do you get a worried feeling?

22. Do you get a scary feeling when you see a dead animal?

23. Do you think you worry more than other boys and girls?

24. Do you worry that you might get hurt in some accident?

25. Has anyone every been able to scare you?

26. Are you afraid of things like guns?

27. Without knowing why, do you sometimes get a funny feeling in your stomach?

28. Are you afraid of being bitten or hurt by a dog?

29. Do you ever worry about something bad happening to someone you know?

30. Do you worry when you are home alone at night?

31. Are you afraid of being too near fireworks because of their exploding?

32. Do you worry that you are going to get sick?

33. Are you ever unhappy?

34. When your mother is away from home, do you worry about whether she is going to come back?

35. Are you afraid to dive into the water because you might get hurt?

36. Do you get a funny feeling when you touch something that has a real sharp edge?

37. Do you ever worry about what is going to happen?

38. Do you get scared when you have to go into a dark room?

39. Do you dislike getting in fights because you worry about getting hurt in them?

40. Do you worry about whether your father is going to get sick?

41. Have you ever had a scary dream?

42. Are you afraid of spiders?

43. Do you sometimes get the feeling that something bad is going to happen to you?

44. When you are alone in a room and you hear a strange noise, do you get a frightened feeling?

45. Do you ever worry?

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